FAA14001-R.3110.A

100—38—101

Nikon FM2

REPAIR MANUAL
修 理 指 針

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Tokyo, Japan

EXPLOSION DRAWINGS

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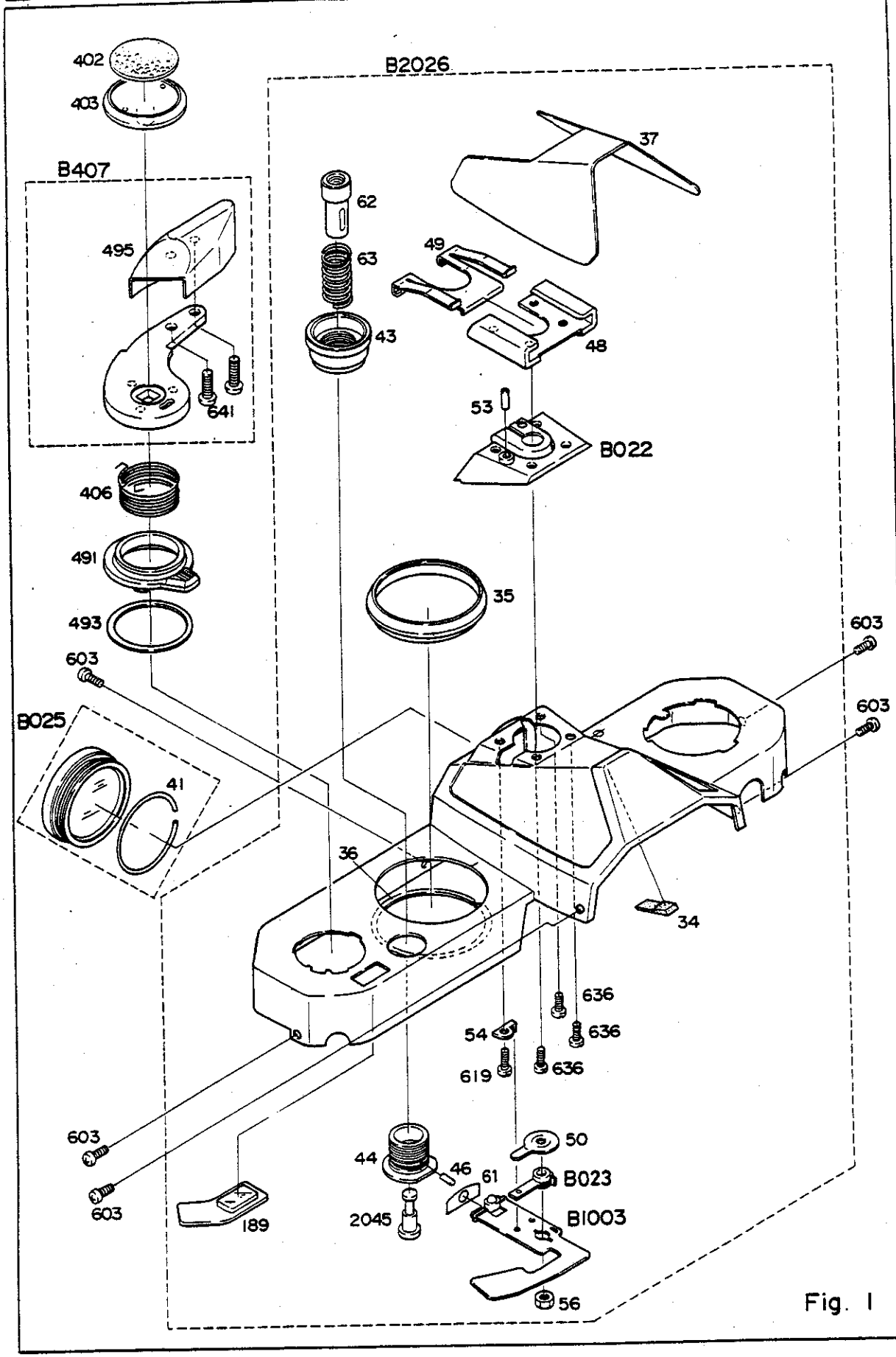

Fig. 1

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
34	1K115-180	グンカン貼付ゴム Rubber, top cover	495	1K680-110	指あて Film-advance lever knob
35	1K640-189-1	飾り環 Cover ring, shutter dial	603A	A1-17030FC	Screw
36	1K248-001	飾り環座金 Washer, cover ring #35	603B	1K001-005	Screw (black)
37	1K115-181	ペンタ皮 Leatherette, top cover	619	B1-17035FA	Screw
41	1K233-014	接眼ガラス押えバネ Eyepiece glass clip	636	B1-17030FA	Screw
43	1K630-080	レリーズ釦飾り環 Release button cover ring	641	1K010-019	巻上レバービス Screw
44	1K640-190	かぶせレリーズ環 Release ring	2045	1K370-363	レリーズ内筒. Release inner tube
46	1K040-001-1	レリーズガイドビス Screw			
48	1K406-012-1	Hシュー Hot shoe contact			
49	1K240-045	シューバネ Shoe contact spring			
50	1K240-046	押え接点 Upper contact, shoe			
53	1K360-007	押 棒 Switch plunger			
54	1K610-166	アースラグ板 Earth lug plate	B022	1B680-006-1	シュー座モールド Shoe mount mold
56	1K030-001	六角ナット Nut	B023	1B240-003	接点モールド Contact mold
61	1K115-293	LED遮光板 Light-tight, LED	B025	1B100-067-1	接眼窓 Eyepiece ring
62	1K400-077-1	レリーズ釦 Release button	B407	1B206-004 BLACK ONLY	巻上レバー Film-advance lever
63	1K220-036	レリーズボタンバネ Spring, shutter release button	B1003	1S005-002	レディライトプリント板 Circuit board, ready-light
189	1K625-007-1	枚数計窓 Frame counter window	B2026A	1B150-008-7	上 蓋 Top cover
402	1K115-198	巻上レバー用皮 Leatherette, film-advance lever	B2026B	1B150-009-7	上 蓋 Top cover (black)
403A	1K146-017	レバー押えネジ Film-advance lever screw			
403B	1K146-018	レバー押えネジ Film-advance lever screw			
406	1K230-039	レバー戻しバネ Spring, film-advance lever reverse			
491	1K206-002	多重撮りツマミ Multi-exposure knob			
493	1K160-181	多重撮りシートB Multi-exposure sheet B			

上地板 Film-advance lever unit

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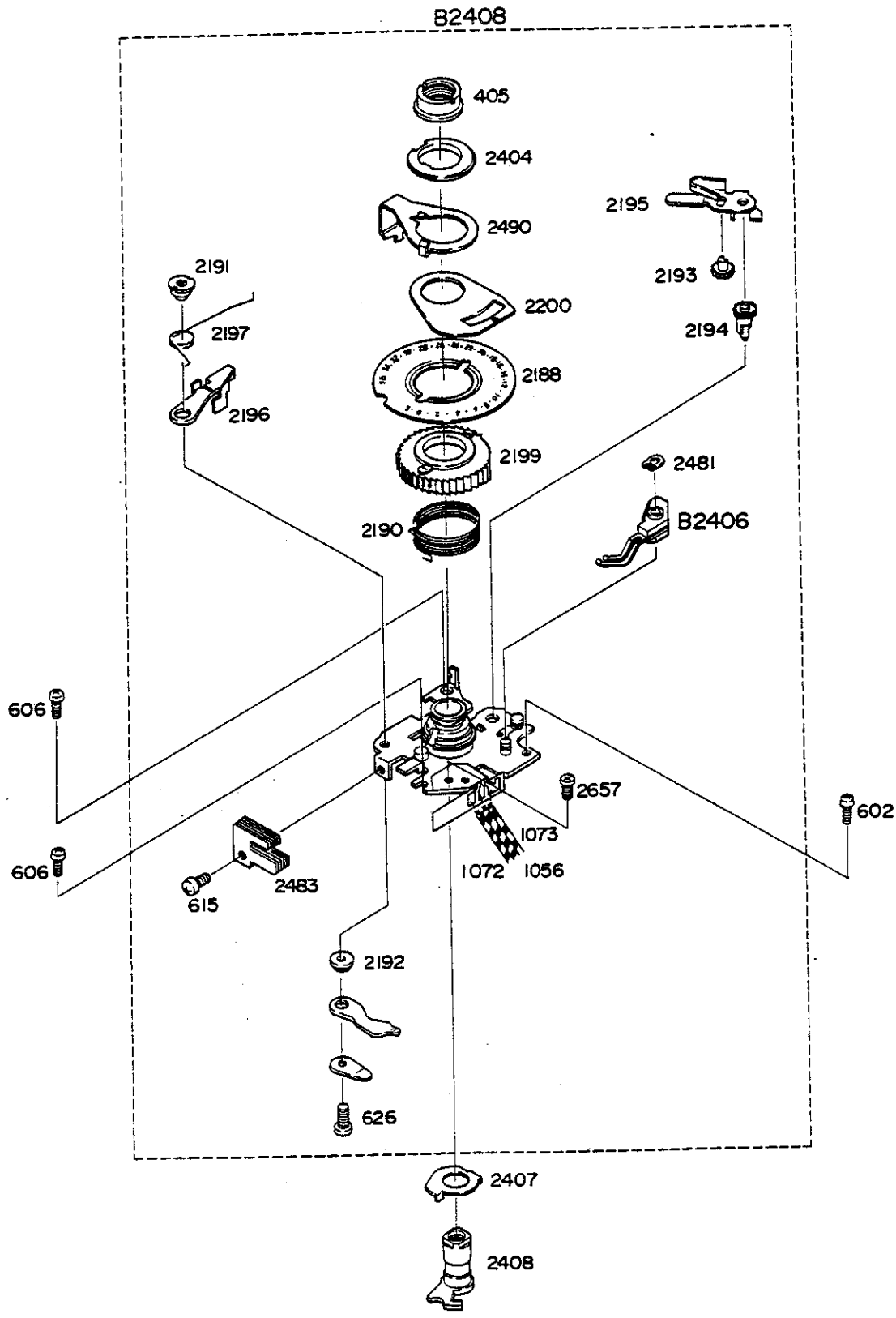

Fig. 2

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
405	1K150-008	レバー軸ナット Nut, film-advance lever shaft	2483	1K610-275	クリックレバーバネ G-snap ring
602A	A1-17030FA	Screw	2490	1K610-277-1	多重撮り連結レバー Multi-exposure lever
602B	A1-17030FC	Screw (black)	2657	1K001-012	クリックレバービス Screw
606	A1-20030FB	Screw			
615	1K123-051	Screw			
626	B1-20050FA	Screw			
1056	1S810-060	Lead wire (purple)			
1072	1S810-102	Lead wire (red)			
1073	1S810-103	Lead wire (orange)	B2406	1B001-131	上地スイッチ Lever switch
2188	1K470-011	枚数計 Frame-counter dial	B2408	1B060-034-4	上地板 Unit, film-advance lever
2190	1K230-076	カウンターバネ Counter spring			
2191	1K150-017	零戻しレバーナット Nut, frame counter reverse lever			
2192	1K330-007	クリックレバーカラー Click lever collar, unit B2408			
2193	1K260-049	送り爪ギア Advance claw gear			
2194	1K260-050	送り爪レバー Claw spring			
2195	1K610-267-1	送り爪バネ Advance claw coupling gear			
2196	1K314-105	零戻しレバー Frame counter reset lever			
2197	1K230-077	零戻しレバー戻しバネ軸 Counter reset lever axle			
2199	1K275-009-1	ラチェット Ratchet, unit B2408			
2200	1K480-005	指標板 Frame counter index			
2404	1K640-253	枚数計押え板 Frame counter retainer			
2407	1K610-270	スプロ制限除板 Sprocket stopper release plate			
2408	1K680-169	巻上軸 Film-advance shaft			
2481	1K060-013-1	クリップリング G-snap ring			

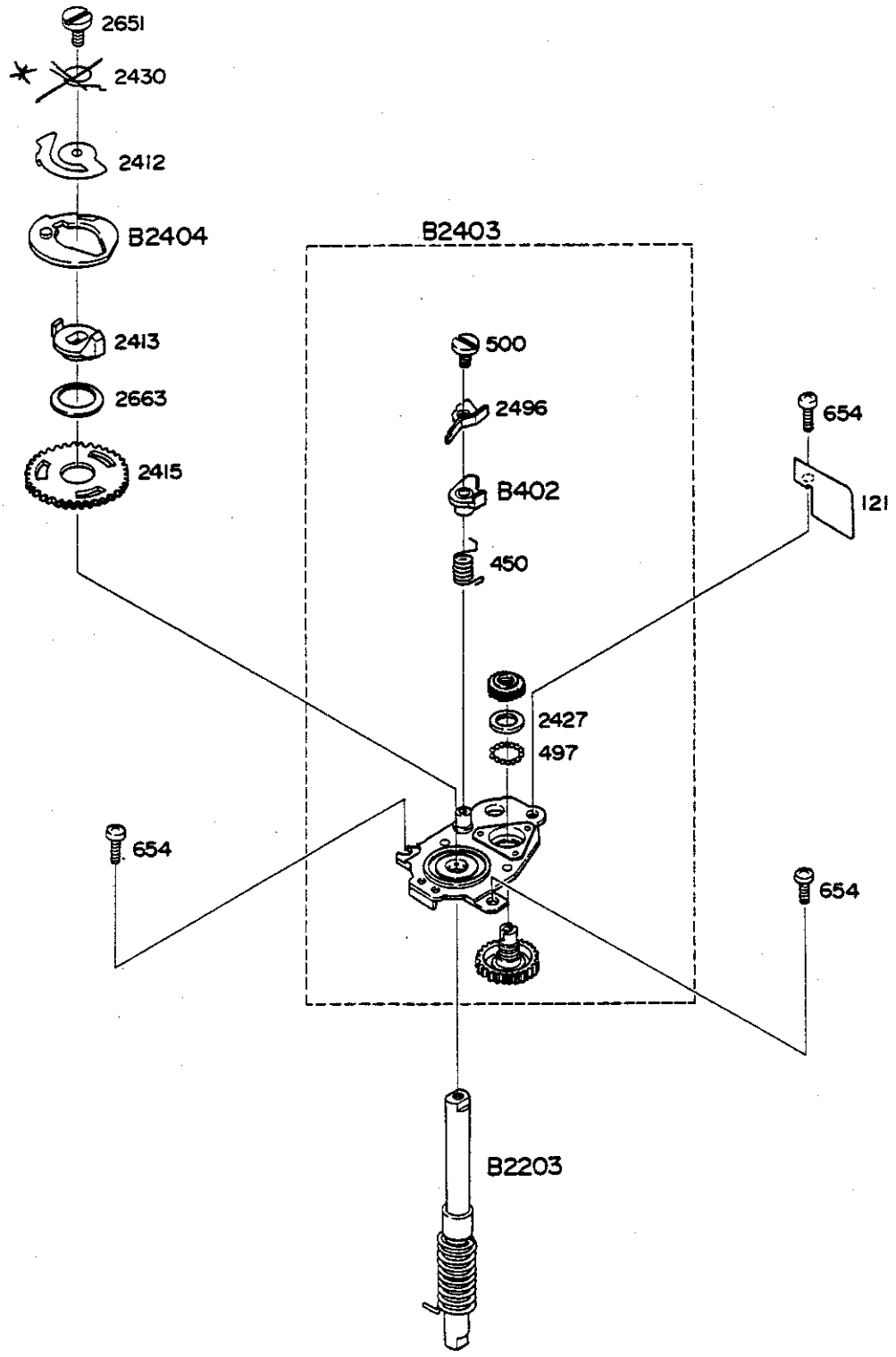
2651
2430
2412
B2404
2413
2663
2415
B2403
500
2496
B402
450
2427
497
654
121
654
654
B2203

Fig. 3

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
121	1K610-281	曲げ板 Plate	B2203	1B001-132-1	スプール軸 Spool shaft
450	1K230-041	スプロストッパーバネ Spring, sprocket stopper reverse	B2403	1B001-129-2	下地板 Unit, film-advance mechanism
497	1K078-006	鋼球 Steel ball	B2404	1B001-130-1	面カム Clutch cam
500	1K120-054	スプロストッパービス Sprocket stopper screw			
654	1K120-063	下地板ビスB Screw, lower unit base B2403			
2412	1K610-271	面カム板バネ Clutch cam spring			
2413	1K680-170	巻上カム Film-advance cam			
2415	1K260-052	巻上ギア Film-advance gear			
2427	1K050-072	アイドルギアAワッシャー Washer, idle gear A			
2430	1K230-078	面カムねじりバネ Clutch spring			
2496	1K610-278	巻上ギア Film-advance gear			
2651	1K130-099	巻上軸ビス Film-advance shaft screw			
2663	1K050-075	巻上ギアワッシャー Washer, wind gear			
2663	1K050-076	巻上ギアワッシャー Washer, wind gear			
2663	1K050-077	巻上ギアワッシャー Washer, wind gear			
2663	1K050-078	巻上ギアワッシャー Washer, wind gear			
2663	1K050-079	巻上ギアワッシャー Washer, wind gear			
2663	1K050-080	巻上ギアワッシャー Washer, wind gear			

巻上軸、スプロケット部

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Film-advance shaft • Sprocket

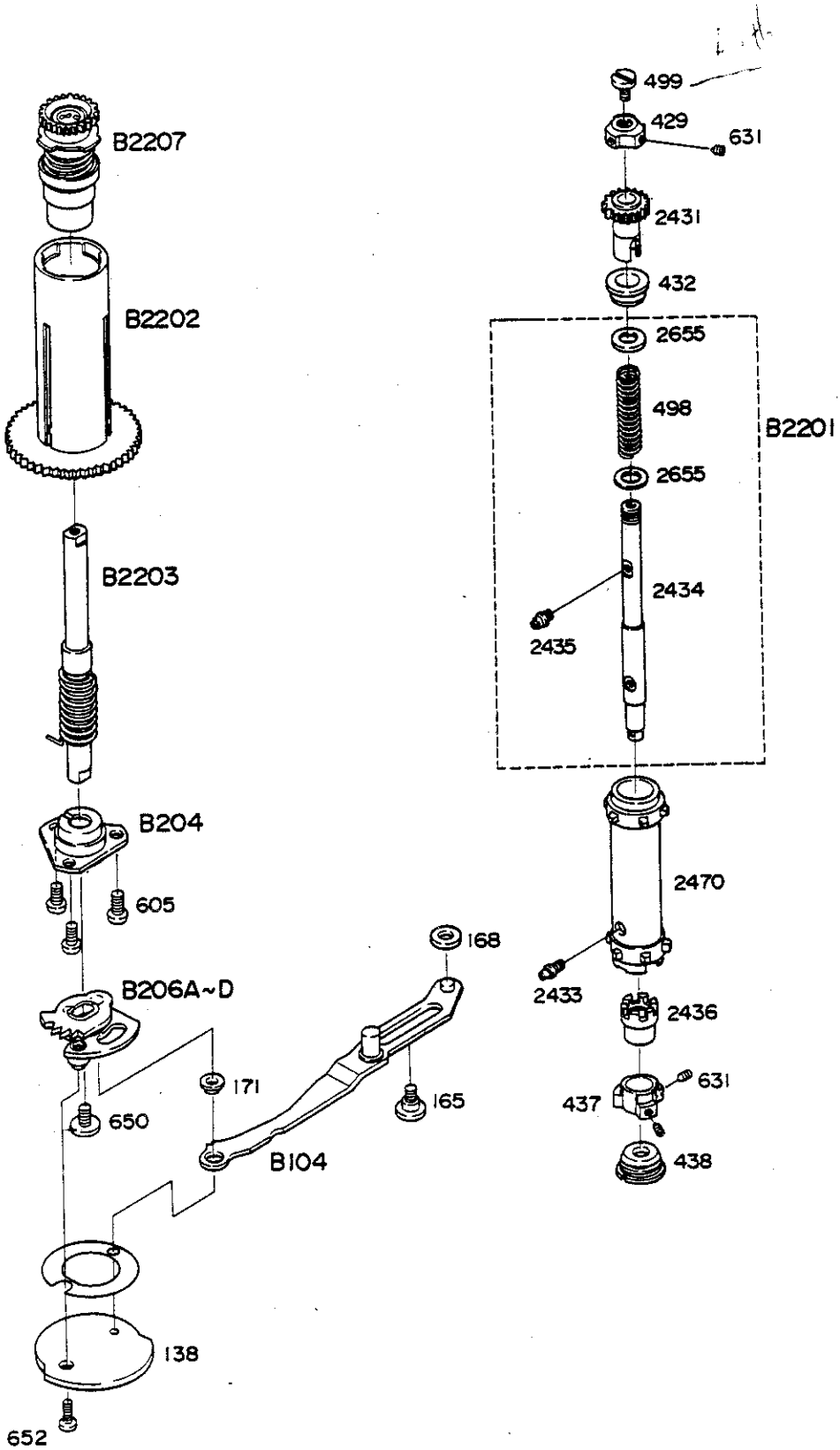
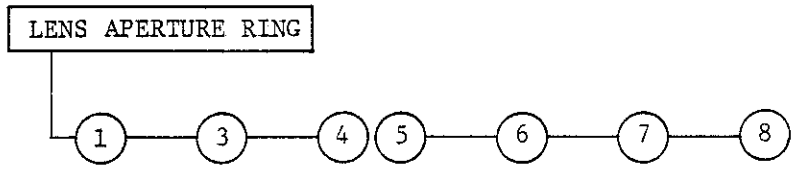


Fig. 4

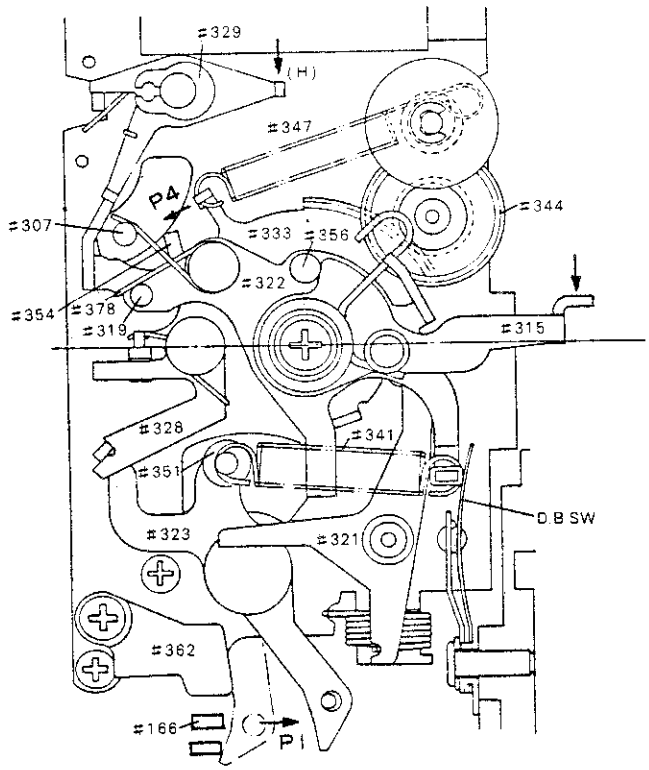
補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
138	1K680-102-1	モーターカップリング Motor coupling	29	1K115-312	ポリエステルフイルム Polye film
165	1K130-056-1	チャージレバービス Screw, shutter charge lever			
168	1K340-019	チャージレバーカラー Charge lever collar			
171	1K340-020	セットカムカラー Set cam collar			
429	1K300-034	スプロケット制限カム Sprocket stopper cam			
432	1K640-198	スプロ軸受 Sprocket shaft bearing	B104	1B314-051	チャージレバー Shutter charge lever
437	1K630-085	スプロカラーAナット Sprocket collar A nut	B204	1B340-001-2	スプール軸受ケース Spool shaft bearing case
438	1K640-199	スプロト軸受 Sprocket shaft lower bearing	B206A	1B300-007-1	セットカムA Set cam A
498	1K220-039	スプロケットバネ Sprocket spring	B206B	1B300-008-2	セットカムB Set cam B
499	1K120-053	スプロケット左ネジ Sprocket screw (left-thread)	B206C	1B300-009-1	セットカムC Set cam C
605	A1-20022FB	Screw	B206D	1B300-010-2	セットカムD Set cam D
631	K2-14015FA	Set screw	B2201	1B001-127	スプロケット軸 Sprocket axle
650	1K120-060	巻上軸ビス Film-advance shaft screw (left-thread)	B2202	1B630-009	スプール Spool
652	1K120-061	カップリングビス Coupling screw	B2203	1B001-132-1	スプール軸 Spool shaft
2431	1K260-056	スプロ上ギア Sprocket upper gear	B2207	1B001-128-2	スプール上ギア Spool top gear
2433	1K130-096	スプロケットビス Sprocket screw			
2434	1K370-367	スプロケット軸 Sprocket shaft			
2435	1K130-097	スプロケットビス Sprocket screw			
2436	1K630-114	スプロケットローラーA Sprocket roller A			
2470	1K275-010	特殊歯車 Gear			
2655	1K050-074	スプロケットバネ受座金 Washer, sprocket spring			

When mounting the lens onto camera body, the meter coupling ridge of lens is engaged with Meter coupling lever (2). Meter coupling ring (1) is connected to Pully (7) via String (3), which is loaded with Spring (10). Thus Meter coupling lever (2) is kept being drawn clockwise toward the largest aperture. Pully (7) is incorporated with Brush (8) moving along FRE (11), where the angle of aperture ring is converted, into resistance value in FRE (11). Rotation of Pully (7) comes to the limit when Stopper (9) located on shutter dial base restricts its rotation. The position is equivalent to the angle 35° where Meter coupling lever (2) reverses freely. Roller (5) is kept being drawn to the arrow direction, with Spring (4) of smaller tension than that of Spring (10) loaded. Then, when removing the lens, Meter coupling ring (1) reverses via String (3) tensioned by Spring (10). After Meter coupling lever (2) reverses to the angle of 35°, Pully (7) is stopped against Stopper (9). Thus there is a space gap of angle of 3° between Meter coupling lever (2) and Stopper (13). So the tension of Spring (4) reverses Meter coupling ring (1) further until the space gap of angle of 3° is eliminated.
When replacing the lens, rotation of Meter coupling ring (1) will bend Sping (4) against front plate die-casting. Further rotation allows Pully (7) to move along FRE (11) via String (3) and Rollers (5), (6). It changes resistance value in FRE (11) as mentioned above.
Meter coupling lever (2) is engaged with the meter coupling ridge of lens at the angle of 37°30' when setting a lens of f/1.4 or f/1.2 to the largest aperture. This angle is reduced to 35° when mounting a lens of slower speeds than f/1.4 in the same sequence as Nikon FM, FE, EM and F3.

OPERATION FLOW-CHART



2. MIRROR BOX MECHANISM



(1) MIRROR CHARGE

Winding film-advance lever pushes Mirror charge lever (#166) toward the arrow (P1) direction. Mirror down spring (#343) and Mirror up spring (#341) are also charged in the same step. Mirror charge lever is cocked by Signal lever (#328).

(2) MIRROR RELEASE

Depressing shutter release button allows see-saw lever to push Mirror-up stop lever (#329) at the end of (H). Mirror-up stop lever turns clockwise and disengages Mirror-up lever (#322). Mirror-up lever is loaded with Mirror-up spring (#341) and thus turns clockwise. Simultaneously, Aperture lever (#315) secured with 3.1 eccentric axle (#356) turns in accordance with Mirror-up lever. Soon after Mirror-up lever moves, Data back switch is closed. Mirror-up lever pushes Mirror holder pin (#307) to raise reflex mirror to the taking position. When reflex mirror moves up to the position which is 3-7mm from mirror box sponge, Unlatch axle (#319) installed atop Mirror-up lever unlatches Stop lever (#354). Stop lever frees Functional gear (#333) and Functional gear turns clockwise, with actuated by Spring (#347). The other half of functional gear forms a cam which is engaged with Shutter release lever(#321). Then, the rotation of functional gear allows Shutter release lever to turn counterclockwise along the cam section. Shutter release lever releases opening curtain lever of shutter unit. So shutter release is started. The gear section of Functional gear is engaged with Fly wheel (#335) via Idle gear (#344), which slows the rotation of Functional gear and provides a time lag from completion of mirror rising to start of shutter release.

(3) MIRROR DOWN

Closing curtain lever of shutter unit releases Signal lever (#328) after shutter release is completed. It unlatches Mirror down lever (#323) and the tention of Mirror down spring (#343) actuates Mirror-up lever (#322). Aperture lever (315), Shutter release lever (#321) and Functional gear (#333) to the original positions. Reflex mirror loaded with Spring (#378) moves down to the viewing position. After Mirrow down lever (#323) returns completely, Mirror-up lever (#322) and Functional gear (#333) are cocked securely.

PARTS LIST

Contents Page

[1] PARTS LIST P1

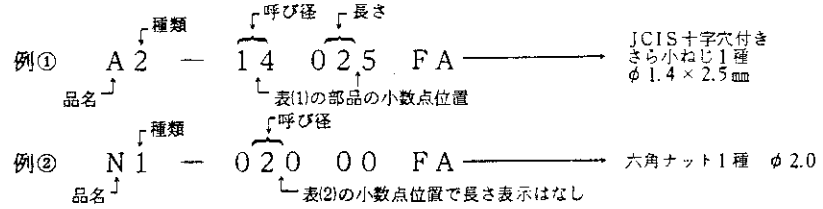
[2] ASSEMBLY LIST P32

Marks in the Parts List

記号説明　MARKS IN THE PARTS LIST

(1) 機 械 標 準 品

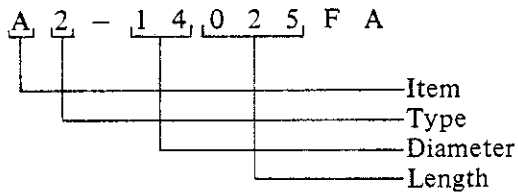
下の表に示す機械標準品の部品番号は品名、種類、呼び径、長さを示しています。



(1) Standard mechanical parts

Reference Number in the Parts List

A. Screw · pin



B. Nut · Washer · Snap ring

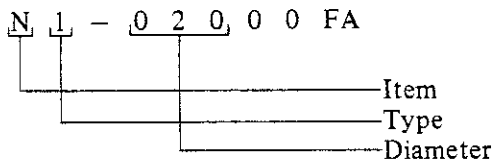


表 1

品名 Item		種類 Type	
JCIS 十字穴付き小ねじ 1種 Cross-point screw 1	A	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
JCIS 十字穴付き小ねじ 3種 〃 screw 3	B	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
十字穴付き小ねじ 〃 Cross-point screw	C	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
		トラス Truss	4
十字穴付き タッピンねじB型 1種 Cross-point tapped screw B1	D	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
十字穴付き タッピンねじB型 3種 〃 screw B3	E	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
十字穴付き タッピンねじ 2種 〃 screw 2	F	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
すりわり付き止ねじ Splitted set screw	K	丸 先 Round point	1
		とがり先 Cone point	2
		くぼみ先 Half point	3
六角穴付き止ねじ Hexagon socket head set screw	L	くぼみ先 Half point	3
六角穴付きボルト Hexagon socket head bolt	M		1
平 行 ピ ン Straight pin	P		1
テ ー パ ピ ン Taper pin			2
スプリングピン Spring cotter		一 般 用 Normal	3
		軽荷重用 Light	4

表 2

品名 Item		種類 Type	
六 角 ナ ッ ト Hexagon nut		1 種 1	1
		3 種 3	3
平 座 金 Washer	R	小 形 丸	1
		みがき丸	2
ば ね 座 金 Spring washer			5
E 型 止 め 輪 E-snap ring	S		1

(2) The term of sale column 販売区分欄

Mark 記号	Explanation 説明	
○	Can be supplied individually	単独部品として販売するもの
△	Not supplied individually but only as subassembly	部組品でなければ販売しないもの
○△	Supplied either as part or subassembly	単独部品でも部組品でも販売するもの
×	Not considered as repair part	修理部品とは考えないもの
※	Should be sent to the factory if the repair is needed	単体では交換できないので、組む場合に工場での加工が必要なもの
◙	Delivered as a product from the sales department (i.e., not supplied as repair part)	商品として販売店で販売しているもの（修理部品扱いはしない）

(3) The remarks column 備考欄

32FB1#664	Part number used in common	共通部品番号
(Blue×125mn)	Lead wire (color×length)	コードの色と長さ
53F2013 (FM-780028)	Technical information ref. number (number in parenthesis; English edition)	製品技術資料番号,（ ）内は英文 No.
(2.1×3.8×0.007)	Washer (internal diameter ×external diameter×thickness)	ワッシャーの（内径×外径×厚さ）
(Black)	Black-finished parts	黒部品
(d=0.2)	Diameter of wire.	線径=0.2
(t=1)	Thickness	厚さ=1
Rev.	Revision	訂正
Add.	Addition	追加
Dis.	Discontinuation	廃止
Ⓟ	Plastic part	プラスチック部品
OLD	Part of the initial design	旧部品
R1…, D1… C1…, Q1… W1…, P1…	Abbreviation for electronic part	電気部品記号

*…… VERSATILE PART

*…… 既出部品

A part marked with this pentagonal symbol is used commonly in the architecture of other products. That is called "VERSATILE PART". Note that every part, bearing new part number of eleven places, will turn into a VERSATILE PART when it is used in the design of future product.

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
612	1K001-004	3		14	o	P33FB#804B
603B	1K001-005	5		1	o	Black P33FB#803
610B	1K001-006	3			o	Black P33FB#804A
2657	1K001-012	2	1B060-034-4 1B060-026-7	2	oΔ	P33FB#954
101	1K010-016	1	1B060-026-7	1	Δ	
102	1K010-017-2	1	1B060-026-7	5	oΔ	
290	1K010-018	2	1B100-071	8	oΔ	35FB#940
641	1K010-019	2	1B206-004	1	oΔ	P33FB#832
56	1K030-001	1	1B150-008-7	1	oΔ	35FB#76-1
46	1K040-001-1	1	1B150-008-7	1	oΔ	P33FB#535B
119	1K044-001-1	2	1B001-085-7		Δ	P33FB#12
645	1K044-003	2		11	o	P33FB#848-1
318	1K050-019	1	1B660-005-8	9	oΔ	P33FB#318-6
361	1K050-020	1	1B001-102-6	10	oΔ	
375	1K050-022	1	1B660-005-8	9	oΔ	33FB#375-5
570	1K050-023	1		6	o	35FB#660
642	1K050-024	1	1B001-102-6	10	oΔ	
662	1K050-029	0-4	1B660-005-8	8	oΔ	P33FB#842a
662	1K050-030	0-4	1B660-005-8	8	oΔ	P33FB#842b

部 品 表　Parts list

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
662	1K050-031	0~4	1B660-005-8	8	o△	P33FB#842c
662	1K050-032	0~4	1B660-005-8	8	o△	P33FB#842d
662	1K050-033	0~4	1B660-005-8	8	o△	P33FB#842e
662	1K050-034	0~4	1B660-005-8	8	o△	P33FB#842f
662	1K050-035	0~4	1B660-005-8	8	o△	P33FB#842g
662	1K050-036	0~4	1B660-005-8	8	o△	P33FB#842h
662	1K050-037	0~4	1B660-005-8	8	o△	P33FB#842i
662	1K050-038	0~4	1B660-005-8	8	o△	P33FB#842j
662	1K050-039	0~4	1B660-005-8	12	o△	P33FB#842k-5
665		1		8	o	
662	1K050-040	0~4	1B660-005-8	8	o△	P33FB#842m
662	1K050-041	0~4	1B660-005-8	8	o△	P33FB#842n
662	1K050-042	0~4	1B660-005-8	8	o△	P33FB#842p
662	1K050-043	0~4	1B660-005-8	8	o△	P33FB#842q
662	1K050-044	0~4	1B660-005-8	8	o△	P33FB#842r
662	1K050-045	0~4	1B660-005-8	8	o△	P33FB#842s
662	1K050-046	0~4	1B660-005-8	8	o△	P33FB#842t
662	1K050-047	0~4	1B660-005-8	8	o△	P33FB#842u
662	1K050-048	0~4	1B660-005-8	8	o△	P33FB#842v
355	1K050-050	1	1B001-102-6	10	o△	

部 品 表 Parts list

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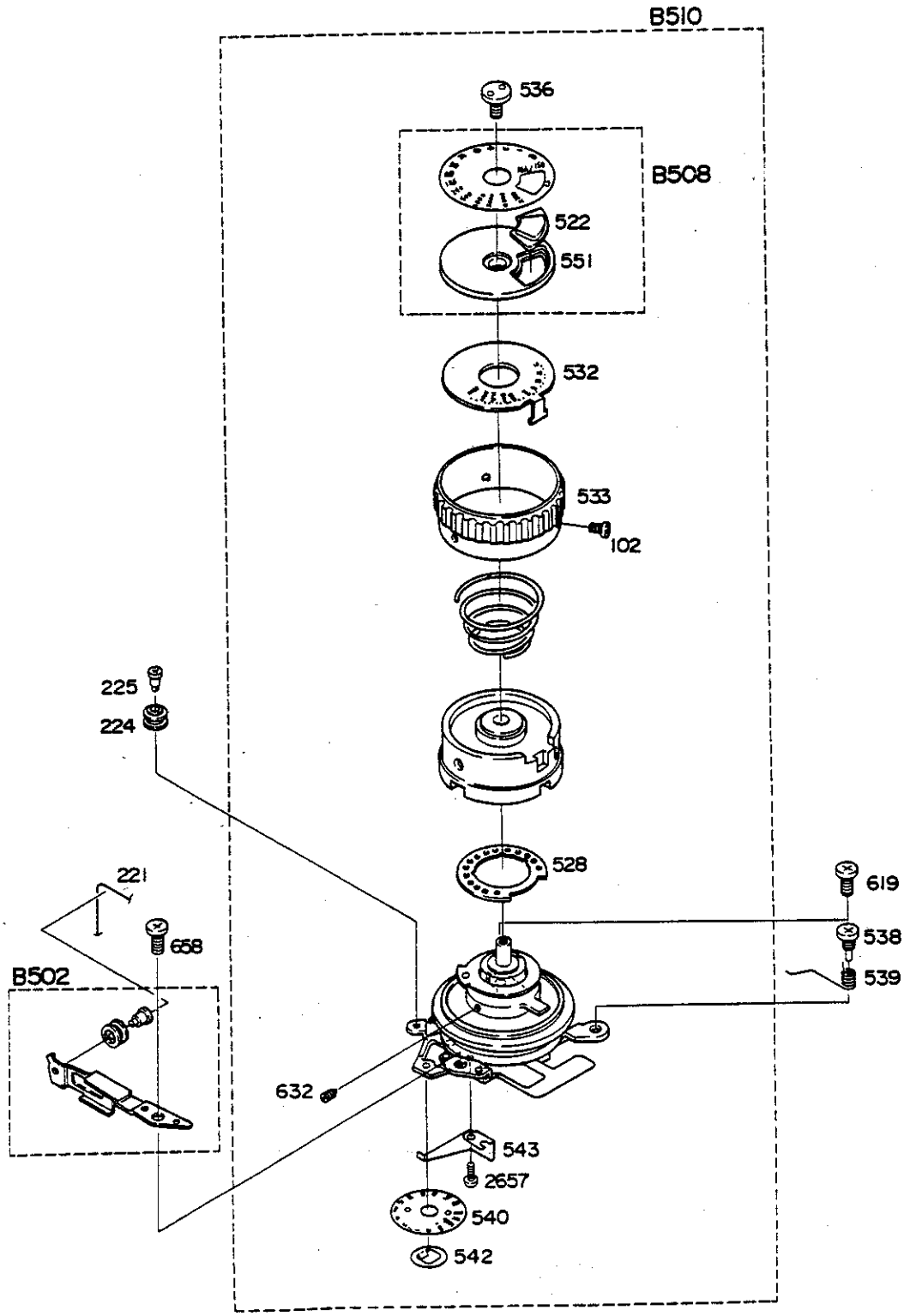
補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
2427	1K050-072	1	1B001-129-2	3	oΔ	P33FB#427
2479	1K050-073	1		11	o	P33FB#489A
2655	1K050-074	2	1B001-127	4	oΔ	P33FB#843-5
2663	1K050-075	0∿1		3	o	P33FB#897A
2663	1K050-076	0∿1		3	o	P33FB#897B
2663	1K050-077	0∿1		3	o	P33FB#897C
2663	1K050-078	0∿1		3	o	P33FB#897D
2663	1K050-079	0∿1		3	o	P33FB#897E
2663	1K050-080	0∿1		3	o	P33FB#897F
228	1K060-003	2	1B001-102-6 1B001-098-1	10 9	oΔ	35FB#642
299	1K060-004	1	1B001-102-6	10	oΔ	35FB#952-5
656	1K060-005-1	1	1B620-008-2	12	oΔ	P33FB#883
2481	1K060-013-1	1	1B060-034-4	2	oΔ	P33FB#831-6
497	1K078-007	48	1B340-001-2 1B060-026-1 1B001-129-2 1B001-128-2	3	oΔ	
525	1K078-008	1	1B060-026-7		Δ	
140	1K080-005	1		11	o	
22A	1K080-006	1	1B100-069-1		Δ	33FB#2-1
22B	1K080-007	1	1B100-072-1		Δ	Black 33FB#2-1
118	1K100-034	2	1B001-085		Δ	P33FB#11-1

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
139	1K100-035	2		11	o	S-8219
2042	1K110-082	1		12	o	P33FB#64
94	*1K115-154	1	1B620-014-2	13	o△	P33FB#726-1
95	*1K115-155	1	1B620-014-2	13	o△	P33FB#727
96	*1K115-156	1	1B620-014-2	13	o△	P33FB#728
97	*1K115-157	2	1B620-014-2	13	o△	P33FB#730
34	1K115-180	1	1B150-008-7	1	o△	35FB#944A
37	1K115-181	1	1B150-008-7	1	o△	
111	1K115-183	1		8	o	
154	1K115-184	1		14	o	33FB#56
155	1K115-185-1	1		14	o	
156	1K115-186	1		14	o	P33FB#58-1
157	1K115-187	1	1B660-005-8	9	o△	P33FB#59
158	1K115-188	1		11	o	P33FB#60
159	1K115-189	1		11	o	P33FB#58A-1
160	1K115-190	1		14	o	P33FB#58B-1
161	1K115-191	1	1B660-005-8	8	o△	
162	1K115-192	2		11	o	P33FB#82-1
177	1K115-193	2	1B001-091-2		△	
40	1K115-297	1	1B150-008-7		△	


B510
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102
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542

Fig. 5

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
181	1K115-194	2	1B001-091-2		Δ	
327	1K115-195	1	1B314-053-2		Δ	35FB#327
357	1K115-196	1	1B001-102-6	10	oΔ	
370	1K115-197	1	1B001-102-6	10	oΔ	
402	1K115-198	1		1	o	P33FB#402
515	1K115-200	1	1B060-026-7		Δ	33FB#558
221	1K115-201	1	1B640-011-1	5,7	oΔ	
232	1K115-202	1		8	o	35FB#232
261	1K115-203	1	1B660-005-8	9	oΔ	P33FB#261
303	1K115-220	1	1B100-068-4	9	oΔ	
52	1K115-233	8	1B660-005-8		oΔ	9F4B#74
61	1K115-293	1	1B150-008-7	1	oΔ	最小要求単位：10個 Min. Order Q'ty:10pcs.
2093	1K115-301	1	1B620-014-2	13	oΔ	
106	1K115-322	1	1B610-012-2		Δ	
107	1K115-323-1	1	1B610-012-2		Δ	
203	1K115-355	1		12	o	
204	1K115-356	1		12	o	
205	1K115-357	1		12	o	
314	1K120-051	1	1B660-005-8	9	oΔ	35FB#314
29	1K115-312	1		4	o	

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
326	1K120-052	1	1B001-102-6	10	o△	
499	1K120-053	1		4	o	P33FB#887-1
500	1K120-054	1	1B001-129-2	3	o△	P33FB#888
536	1K120-055	1	1B060-026-7	5	o△	33FB#578-1
557	1K120-056-1	2	1B060-026-7		△	
650	1K120-060	1		4	o	P33FB#815-5
652	1K120-061	1		4	o	P33FB#820
654	1K120-063	3		3	o	P33FB#835
649B	1K120-064	1	1B660-006-8		o△	Black P33FB#813
649A	1K120-092	1	1B660-005-8	7	o△	P33FB#813
98	*1K123-034	1	1B620-014-2	13	o△	P33FB#731
628	1K123-038	1	1B660-005-8	8	o△	
647	1K123-039	3	1B660-005-8	7	o△	P33FB#805
648	1K123-040	1		12	o	
643	1K123-042	7	1B660-005-8	8	o△	P33FB#810
66	1K130-052	2		11	o	
72	1K130-053	2		9, 11	o	
134	1K130-054	1		12	o	P33FB#914
615	1K123-051	1	1B060-034-4	2	o△	

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
164	1K130-055	1		12	o	
165	1K130-056-1	1		4	o	
167	1K130-057	1		12	o	
334	1K130-058	1	1B660-005-8	9	o△	
474	1K130-063	1		12	o	P33FB#539
538	1K130-065	1		5	o	
646	1K130-067	1	1B660-005-8	10	o△	35FB#886-5
225	1K130-072	1		5	o	
2433	1K130-096	1		4	o	P33FB#435A
2435	1K130-097	1	1B001-127	4	o△	P33FB#435
2441	1K130-098	1		11	o	P33FB#441-6
2651	1K130-099	1		3	o	P33FB#815A-5
116	1K146-016	1		14	o	
403A	1K146-017	1	1B060-034-4	1	o△	P33FB#403-1
403B	1K146-018	1	1B060-051-2		o△	Black P33FB#403-1
405	1K150-008	1	1B060-034-4	2	o△	P33FB#405-2
526	1K150-010	1	1B060-026-7		△	
2191	1K150-017	1	1B060-034-4	2	o△	P33FB#508-6
493	1K160-180	1	1B150-008-7	1	o△	35FB#493A

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
493	1K160-181	1	1B150-008-7	1	o△	35FB#493B
493	1K160-182	1	1B150-008-7	1	o△	35FB#493C
534	1K160-183	1	1B060-026-7		△	33FB#544-1
528	1K160-195-1	1	1B060-026-7	5	o△	
533	1K201-012	1	1B060-026-7	5	o△	
563	1K201-013	1		6	o	35FB#653
567	1K201-014	1	1B314-049		△	35FB#657
401	1K206-001	1	1B206-004		△	P33FB#401-1
491	1K206-002	1	1B150-008-7	1	o△	35FB#491
217	1K208-009	1	1B001-098-1		△	P33FB#217-6
99	*1K220-031	1	1B620-014-2	13	o△	P33FB#732
63	1K220-036	1	1B150-008-7	1	o△	
65	1K220-037-1	1		11	o	
83	1K220-38-1	1		14	o	P33FB#714
498	1K220-039	1	1B001-127	4	o△	P33FB#498
213	1K220-041	1	1B001-098-1	9	o△	35FB#214A-6
216	1K220-042	1	1B660-005-8		△	P33FB#216
535	1K220-043	1	1B060-026-7		△	33FB#557-1
2446	1K220-064	1	1B001-128-2		△	P33FB#456A

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
128	1K225-042-1	1		12	o	P33FB#538A
341	1K225-043-1	1	1B001-102-6	10	oΔ	
347	1K225-044-2	1	1B001-102-6	10	oΔ	
565	1K225-045	1		6	o	35FB#655
176	1K230-025-1	1	1B001-091-2	12	oΔ	
313	1K230-028	1	1B660-005-8	9	oΔ	P33FB#313-6
339	1K230-029	1	1B001-102-6	10	oΔ	35FB#339-6
340	1K230-030-1	1	1B001-102-6	10	oΔ	
343	1K230-031-2	1	1B610-005-8	9	oΔ	
348	1K230-032	1	1B001-102-6	10	oΔ	
349	1K230-033-1	1	1B001-102-6	10	oΔ	
352	1K230-034	1	1B001-102-6	10	oΔ	
378	1K230-035	1	1B660-005-7	10	oΔ	
406	1K230-039	1	1B060-034-4	1	oΔ	35FB#406-2
450	1K230-041	1	1B001-129-2	3	oΔ	P33FB#450
465	1K230-043	1		12	o	P33FB#465
466	1K230-044-1	1	1B001-132-1		Δ	P33FB#529-1
539	1K230-046-1	1		5	o	
2190	1K230-076	1	1B060-034-3	2	oΔ	P33FB#505-6

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
2197	1K230-077	1	1B060-034-4	2	o△	P33FB#522A-5
2430	1K230-078	1		3	o	P33FB#414B-5
2476	1K230-079	1	1B060-034-4		△	P33FB#476
41	1K233-014	1	1B100-067-1	1	o△	P33FB#9
518	1K233-015	6	1B060-026-7		△	33FB#560
233	1K233-016-1	2		8	o	35FB#233
84	*1K240-033-1	1	1B620-014-2		△	
49	1K240-045	1	1B150-008-7	1	o△	35FB#68
50	1K240-046	1	1B150-008-7	1	o△	P33FB#47
51	1K240-047	1	1B240-003		△	P33FB#70-1
69	1K240-048	1	1B314-056-2		△	
74	1K240-049	1	1B001-086		△	P33FB#703-1
146	1K240-050	1	1B060-021		△	P33FB#47
178	1K240-051	1	1B001-091-2		△	
179	1K240-052	1	1B001-091-2		△	
345	1K240-054	1	1B100-068-4		△	P33FB#345
346	1K240-055	1	1B100-068-4		△	P33FB#346
364	1K240-056-1	1	1B060-022-2		△	
365	1K240-057-1	1	1B060-022-2		△	35FB#926

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
520	1K240-061	1	1B060-026-7		Δ	33FB#567-1
524	1K240-062	0∿1	1B060-026-7		Δ	
527	1K240-063-1	1	1B060-026-7		Δ	
566	1K240-064-1	1		6	o	P33FB#656
208	1K240-065-1	1	1B660-005-8	7	oΔ	P33FB#208-8
222	1K240-066	1	1B001-106-1		Δ	
240	1K240-067	1	1B660-005-8	8	oΔ	35FB#240-5
244	1K240-068	2	1B001-099-1		Δ	35FB#244-2
288	1K240-069	1	1B100-071		Δ	35FB#941-1
289	1K240-070	1	1B100-071		Δ	35FB#942-1
543	1K240-071-2	1	1B060-026-7	5	oΔ	
519	1K240-072	1	1B060-026-7		Δ	33FB#561
49	1K240-073	1	1B150-009-7	1	oΔ	35FB#68
260	1K240-074	1		8	o	35FB#260
524	1K240-119-1	0∿1	1B060-026-7		Δ	
512	1K245-001	1	1B060-026-7		Δ	
516	1K246-005	1	1B060-026-7		Δ	33FB#559-1
36	1K248-001	1	1B150-008-7	1	oΔ	
517	1K248-002	1	1B060-026-7		Δ	

部 品 表 Parts list

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
542	1K248-003	1	1B060-026-7	5	o△	
333	1K260-008-1	1	1B001-102-6		△	
336	1K260-009-1	1	1B260-002-1		△	
338	1K260-010-2	1	1B001-102-6		△	
344	1K260-011-1	1	1B001-102-6		△	
509	1K260-017-1	1	1B060-026-7		△	
541	1K260-018	1	1B060-026-7		△	
545	1K260-019-1	1	1B060-026-7		△	
2193	1K260-049	1	1B060-034-4	2	o△	P33FB#510-6
2194	1K260-050	1	1B060-034-4	2	o△	P33FB#511-6
2411	1K260-051	1	1B001-129-2		△	P33FB#418
2415	1K260-052	1		3	o	P33FB#415-6
2416	1K260-053	1	1B001-129-2		△	P33FB#416-1
2417	1K260-054	1	1B001-129-2		△	P33FB#417-6
2420	1K260-055-1	1	1B001-128-2		△	P33FB#420-2
2431	1K260-056	1		4	o	P33FB#431-6
530	1K267-001-1	1	1B060-026-7		△	
531	1K267-002	1	1B060-026-7		△	
2199	1K275-009-1	1	1B060-034-4	2	o△	P33FB#532-6

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
507	1K277-003-1	1	1B060-026-7		Δ	
544	1K277-004-1	1	1B060-026-7		Δ	
429	1K300-034	1		4	o	P33FB#429
443	1K310-019	1	1B001-129-2		Δ	P33FB#443
554	1K310-020	1	1B310-020		Δ	
79	1K314-050	1		14	o	35FB#708-1
129	1K314-051-1	1		12	o	P33FB#462
2470	1K275-010	1		4	o	P33FB#531-6
130	1K314-052-1	1		12	o	
166	1K314-053	1		12	o	
169	1K314-054	1	1B314-051		Δ	
174	1K314-055-1	1	1B001-091-2		Δ	
175	1K314-056	1		12	o	
310	1K314-057-1	1	1B314-052-1		Δ	
315	1K314-058	1	1B314-054-1		Δ	
317	1K314-059	1	1B001-102-6		Δ	
321	1K314-060	1	1B001-102-6		Δ	
322	1K314-061-1	1	1B314-053-2		Δ	
323	1K314-062	1	1B001-102-6		Δ	

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
328	1K314-063	1	1B001-102-6		Δ	
329	1K314-064-1	1	1B001-102-6	10	oΔ	
354	1K314-065	1	1B001-102-6		Δ	
444	1K314-069	1	1B001-129-2		Δ	P33FB#444
553	1K314-072	1	1B060-026-7		Δ	
418	1K314-080	1	1B060-034-4		Δ	
2064	1K314-104-1	1	1B314-056-2		Δ	
2196	1K314-105	1	1B060-034-4	2	oΔ	P33FB#522-6
2484	1K314-106	1	1B060-034-4		Δ	P33FB#484-6
2192	1K330-007	1	1B060-034-4	2	oΔ	P33FB#509-6
561	1K333-003	1		6	o	
131	1K340-018	1		12	o	
168	1K340-019	1		4	o	
171	1K340-020	1		4	o	P33FB#460
449	1K340-023	1	1B001-129-2		Δ	P33FB#449
503	1K340-025-1	1	1B060-026-7		Δ	
2409	1K340-040	1	1B060-034-4		Δ	P33FB#409-6
53	1K360-007	1	1B150-008-7	1	oΔ	P33FB#73
90	*1K362-007-1	1	1B620-014-2	13	oΔ	P33FB#722

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番品 Part No.	名称 Name
102	1K010-017-2	タップタイトビス Screw	B502	1B001-106-1	コロバネ Roller spring
221	1K115-201	連動ひも Spring, aperture coupling	B508	1B470-001	シャッター目盛 Shutter speeds disk
224	1K640-209-1	ひもかけコロ Roller, aperture coupling string	B510	1B060-026-7	管制部 Shutter control unit
225	1K130-072	ヒモカケコロビス Screw, roller #224			
522	1K625-011	シャッター目盛板 Shutter dial index		1B060-026-5 1/12.5 × 1.2	
528	1K160-195-1	クリック座金 Disk, shutter dial click		1B470-003 1/2.5 × 0.4	only
532	1K470-003	ASA目盛環 ASA calibration disk		1B060-157-3 1/250 × 0.4	
533	1K201-012	シャッターダイヤル環 Shutter dial			
536	1K120-055	ダイアル上面ビス Screw, shutter dial			
538	1K130-065	管制部ビス Screw, shutter control unit			
539	1K230-046-1	アースばね Earth spring, shutter control unit			
540	1K470-005-1	Tフィルム Shutter speeds inner indicator			
542	1K248-003	Tフィルム押え Retainer, shutter speeds inner indicator			
543	1K240-071-2	クリックばね Click spring			
551	1K640-207	シャッター目盛基板 Base, shutter speeds calibration disk			
619	B1-17035FA	Screw			
632	K2-14025FA	Screw			
658	B1-20030FB	Screw			
2657	1K001-012	Screw			

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
2087	1K362-014	1	1B620-014-2		△	P33FB#718
67	1K366-010	1	1B314-056-2		△	
356	1K366-011-1	1	1B314-053-2		△	
363	1K366-012	1	1B001-102-6		△	
391	1K366-013	1	1B001-102-6		△	P33FB#391
	*1K370-042	1	1B400-001-1		△	
	*1K370-043	1	1B400-001-1		△	
81	*1K370-176-1	1	1B620-014-2		△	P33FB#710
82	*1K370-177	2	1B620-014-2		△	P33FB#711-1
86	*1K370-179-1	2	1B620-014-2		△	
89	*1K370-181	3	1B620-014-2		△	P33FB#721
33	1K370-189	1	1B620-008-2	12	o△	P33FB#439
57	1K370-191	1	1B680-006-1		△	35FB#77
75	1K370-192	2	1B001-086		△	P33FB#704-2
76	1K370-193	4	1B620-014-2		△	P33FB#705
103	1K370-194	1		14	o	
108	1K370-195	1	1B310-019		△	
132	1K370-196	1		12	o	P33FB#911
147	1K370-197	1	1B060-021		△	P33FB#48

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
170	1K370-198	1	1B314-051		Δ	
172	1K370-199	1	1B314-051		Δ	
173	1K370-200-1	1	1B001-091-2		Δ	
302	1K370-203	1	1B001-100		Δ	
306	1K370-204	4	1B100-068-4		Δ	P33FB#306
307	1K370-205-2	1	1B100-068-4		Δ	
311	1K370-206	1	1B314-052-1		Δ	
312	1K370-207-1	1	1B314-054-1		Δ	
319	1K370-208	1	1B314-053-2		Δ	
324	1K370-209	1	1B314-054-1		Δ	
325	1K370-210	1	1B001-102-6		Δ	
330	1K370-211	1	1B001-102-6		Δ	
331	1K370-212	1	1B001-102-6		Δ	
337	1K370-213	1	1B001-102-6		Δ	
342	1K370-214	1	1B001-102-6		Δ	
351	1K370-215	1	1B001-102-6		Δ	
353	1K370-216	1	1B001-102-6		Δ	
373	1K370-217	1	1B100-068-4		Δ	P33FB#373-1
380	1K370-218	1	1B314-053-2		Δ	

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
389	1K370-220	1	1B001-102-6		Δ	
440	1K370-224	1	1B001-129-2		Δ	P33FB#440
448	1K370-225	1	1B001-129-2		Δ	P33FB#448
458	1K370-227	1	1B300-010-2 1B300-009 1B300-008-2 1B300-007		Δ	P33FB#458
504	1K370-232	1	1B060-026-7		Δ	
506	1K370-233	1	1B060-026-7		Δ	
510	1K370-234-1	1	1B060-026-7		Δ	
546	1K370-235	1	1B060-026-7		Δ	
547	1K370-236	1	1B060-026-7		Δ	
548	1K370-237-2	1	1B060-026-7		Δ	
556	1K370-238	1	1B310-020		Δ	
562	1K370-239	1		6	o	
568	1K370-240	1	1B314-049		Δ	35FB#658
212	1K370-241-1	1	1B001-098-1		Δ	35FB#212-6
215	1K370-242	1	1B001-098-1		Δ	P33FB#215-6
243	1K370-244-1	4	1B001-099-1		Δ	35FB#243
246	1K370-245	1	1B001-102-6		Δ	
247	1K370-246	1	1B001-102-6		Δ	
248	1K370-247	1	1B001-100		Δ	

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
226	1K370-355-1	1	1B001-106-1		Δ	
2045	1K370-363	1	1B150-008-7	1	oΔ	35FB#470-5
2419	1K370-364	1	1B001-129-2		Δ	P33FB#419
2426	1K370-365	1	1B001-129-2		Δ	P33FB#426
2428	1K370-366-1	1	1B001-130-1		Δ	P33FB#414A-5
2434	1K370-367	1	1B001-127	4	oΔ	P33FB#434-6
2453	1K370-368-1	1	1B001-132-1		Δ	
2473	1K370-369	1	1B060-034-4		Δ	P33FB#473-6
2477	1K370-370	1	1B060-034-4		Δ	P33FB#477-6
2482	1K370-371	2	1B060-034-4		Δ	P33FB#482-6
2485	1K370-372	1	1B060-034-4		Δ	P33FB#485-6
55	1K380-007	1	1B680-006-1		Δ	P33FB#75
	1K400-016-1	1	1B400-001-1		Δ	
39	1K400-076-1	1	1B100-067-1		Δ	P33FB#8-1
62	1K400-077-1	1	1B150-008-7	1	oΔ	
117	1K400-078	1		12	o	23FB#10
38A	1K400-079-1	1	1B150-008-7		Δ	35FB#7
38B	1K400-082	1	1B150-009-7		Δ	Black 35FB#7
202	1K404-030	1	1B660-005-8	7	oΔ	P33FB#202-6
105	1K370-358-1	1		14	o	

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
48	1K406-012-1	1	1B150-008-7	1	o△	35FB#67-1
120	1K467-016	1		6	o	P33FB#13
142	1K467-017-1	1	1B467-007-1		△	P33FB#44
532	1K470-003	1	1B060-026-7	5	o△	
537	1K470-004	1	1B470-001		△	
540	1K470-005-1	1	1B060-026-7	5	o△	
2188	1K470-011	1	1B060-034-4	2	o△	P33FB#502-1
2200	1K480-005	1	1B060-034-4	2	o△	P33FB#533
572	1K485-036	1		6	o	
251	1K576-025-1	1	1B100-076	8	o△	
257	1K576-027	2	1B100-071		△	P33FB#257
78	*1K600-079	1	1B620-014-2		△	P33FB#707-1
71	1K600-086	1	1B314-056-2		△	
73	1K600-087	1	1B001-086		△	P33FB#702-2
109	1K600-088	1	1B310-019		△	
113	1K600-089	1		8	o	
114	1K600-090-1	1		8	o	
115	1K600-091	1		8	o	
133	1K600-097	1		12	o	

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
137	1K600-093	1	1B001-092		Δ	P33FB#924-1
304	1K600-094-1	2	1B100-068-4		Δ	
332	1K600-095	1	1B001-100		Δ	
358	1K600-096	1	1B001-102-6	10	oΔ	
369	1K600-097	1	1B060-022-2		Δ	35FB#931
374	1K600-099	1	1B660-005-7	9	oΔ	35FB#946
468	1K600-101	0∿1	1B300-009 1B300-007		Δ	P33FB#530A
468	1K600-102-1	0∿1	1B300-010-2 1B300-008-2		Δ	P33FB#530B-1
214	1K600-104	1	1B001-098-1		Δ	
47	1K600-130	1		11	o	
2456	1K600-151	1	1B001-128-2		Δ	P33FB#456-1
2472	1K600-152	1	1B001-131		Δ	P33FB#472-6
2475	1K600-153	1	1B001-131		Δ	P33FB#540A-6
2486	1K600-154	1	1B001-131		Δ	P33FB#487A-5
88	*1K610-163	1	1B620-014-2		Δ	P33FB#720
54	1K610-166	1	1B150-008-7	1	oΔ	35FB#84
77	1K610-168	1		14	o	35FB#706
80	1K610-169	1		14	o	P33FB#709
112	1K610-170	1	1B660-005-8	9	oΔ	

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
126	1K610-172	1		12	o	P33FB#537-6
143	1K610-173	1		12	o	P33FB#45-1
148	1K610-174	1	1B060-021		Δ	P33FB#49
182	1K610-175	1	1B001-091-2		Δ	
301	1K610-177	1	1B001-068-4		Δ	
308	1K610-178-1	1	1B206-002-1		Δ	35FB#311A
410	1K610-185	1	1B206-004		Δ	35FB#401A-1
447	1K610-187	1	1B001-129-2		Δ	P33FB#447-5
300	1K610-192-1	1	1B660-005-5 1B001-102-6		Δ	
501	1K610-193-1	1	1B060-026-7		Δ	
571	1K610-195	1		6	o	
231	1K610-200	1	1B060-027-3		Δ	35FB#231-1
235	1K610-201	1	1B100-070-1		Δ	33FB#235
236	1K610-202	1	1B100-070-1		Δ	33FB#236
237	1K610-203	1		8	o	33FB#237
239	1K610-204	1	1B060-027-3		Δ	
254	1K610-205	2	1B100-071		Δ	35FB#254
255	1K610-206	1	1B100-071		Δ	P33FB#255
2125	1K610-266-1	1		12	o	35FB#79-1

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
2195	1K610-267-1	1	1B060-034-4	2	o△	P33FB#521-6
2198	1K610-268	1	1B060-034-4		△	P33FB#526
2393	1K610-269-1	1	1B610-012-2		△	
2407	1K610-270	1	1B060-034-4	2	o△	P33FB#408A
2412	1K610-271	1		3	o	P33FB#412-7
2414	1K610-272-1	1	1B001-130-1		△	P33FB#414-6
2445	1K610-273	1	1B001-129-2		△	P33FB#445
2451	1K610-274-1	1	1B060-034-4		△	P33FB#451-7
2483	1K610-275	6	1B060-034-4	2	o△	P33FB#483-6
2487	1K610-276	1	1B001-131		△	P33FB#487-6
2490	1K610-277-1	1	1B060-034-4	2	o△	35FB#490-1
2496	1K610-278	1	1B001-129-2	3	o△	P33FB#496-6
2085	1K610-280	1	1B620-014-2		△	P33FB#716
121	1K610-281	1		3	o	
23A	1K620-018-1	1	1B150-008-7		△	
24A	1K620-019	1	1B620-008-2		△	P33FB#4
136	1K620-021	4	1B001-092		△	P33FB#919-1
523	1K620-022-1	1	1B060-026-7		△	

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
245	1K620-032	1	1B001-099-1		Δ	35FB#245
250	1K620-033	1	1B660-005-8	8	oΔ	
23B	1K620-034-1	1	1B150-009-7		Δ	Black
24B	1K620-035	1	1B620-010-1		Δ	Black P33FB#4
2462	1K620-047	1	1B001-128-2		Δ	
110	1K625-006	1	1B206-003		Δ	
189	1K625-007-1	1	1B150-008-7	1	oΔ	
459	1K625-008-1	0∿1	1B300-008-2 1B300-007		Δ	P33FB#459A
459	1K625-009-1	0∿1	1B300-010-2 1B300-009		Δ	P33FB#459B
564	1K625-010	1	1B314-049		Δ	P33FB#654-1
522	1K625-011	1	1B470-001	5	oΔ	33FB#541B
2452	1K625-017-1	1	1B001-129-2		Δ	P33FB#452-6
43	1K630-080	1	1B150-008-7	1	oΔ	
104	1K630-081	1		14	o	
144	1K630-082	1	1B467-007-1		Δ	P33FB#46
424	1K630-083	1	1B001-128-2		Δ	P33FB#424-1
437	1K630-085	1		4	o	P33FB#437
461	1K630-087	1	1B300-010-2 1B300-009 1B300-008-2 1B300-007		Δ	P33FB#461
529	1K630-089	1	1B060-026-7		Δ	
2025	1K620-046-2	1	1B620-014-2		Δ	

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
218	1K630-090	1	1B660-005-8		Δ	P33FB#218
2421	1K630-113	1	1B001-128-2		Δ	P33FB#421-1
2436	1K630-114	1		4	o	P33FB#436-1
2455	1K630-115	1	1B630-009		Δ	P33FB#455
2460	1K630-116	1	1B630-009		Δ	P33FB#528
31	1K640-187	1	1B620-010-1 1B620-008-2		Δ	P33FB#922
32	1K640-188	1	1B620-010-1 1B620-008-2		Δ	P33FB#540
35	1K640-189-1	1	1B620-010-1 1B150-008-7	1	oΔ	
44	1K640-190	1	1B150-008-7	1	oΔ	
320	1K640-191	1	1B001-102-6		Δ	
335	1K640-192	1	1B260-002-1		Δ	
423	1K640-196	2	1B340-001-2 1B001-129-2		Δ	23FB P33FB#423
432	1K640-198	1		4	o	
438	1K640-199	1		4	o	P33FB#438-6
454	1K640-201-1	1	1B340-001-2		Δ	P33FB#454
457	1K640-202	2	1B340-001-2 1B001-129-2		Δ	P33FB#457
513	1K640-205-1	1	1B060-026-7		Δ	
514	1K640-206	1	1B060-026-7		Δ	33FB#614A-1
551	1K640-207	1	1B470-001	5	oΔ	33FB#541-3

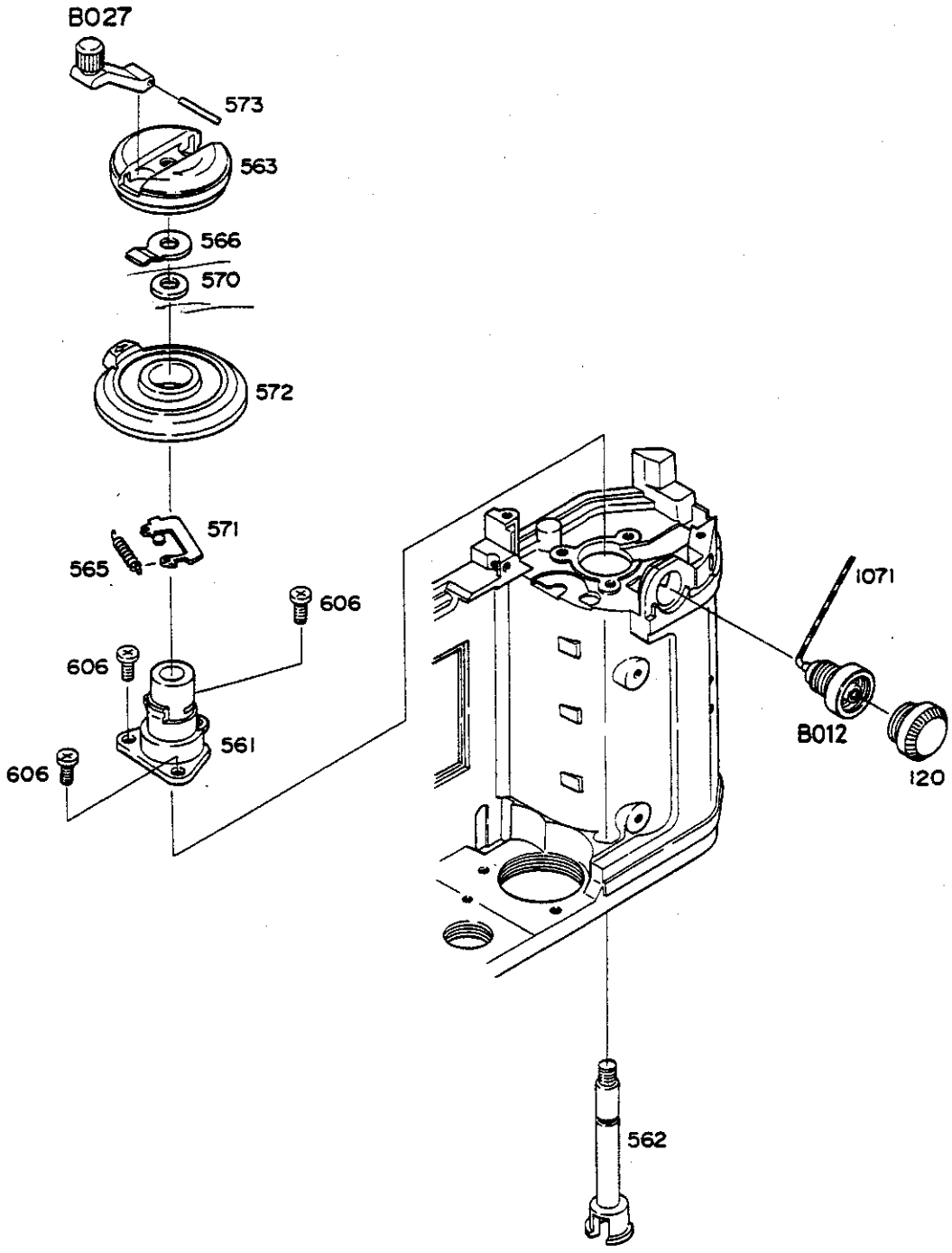
B027
573
563
566
570
572
571
565
606
606
561
606
1071
B012
120
562

Fig. 6

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
220	1K640-208-1	1	1B640-011-1	7	o△	
224	1K640-209-1	1		5	o	
223	1K640-250-1	1	1B001-106-1		△	
2404	1K640-253	1	1B060-034-4	2	o△	35FB#404A
2422	1K640-254	1	1B001-129-2		△	P33FB#422-6
2425	1K640-255	1	1B001-129-2		△	P33FB#425
2442	1K640-256	1	1B630-009		△	P33FB#455A
127	1K650-003	1		12	o	P33FB#538
26	1K660-015-1	1	1B660-005-8		△	
2021	1K660-022-2	1			×	
68	1K680-097-1	1	1B314-056-2		△	
91	1K680-098-1	1	1B620-014-2		△	
122	1K680-099	1		8	o	33FB#39
123	1K680-100	1		8	o	33FB#40
135	1K680-101	1	1B001-092		△	P33FB#916-1
138	1K680-102-1	1		4	o	
145	1K680-103	1	1B060-021		△	
180	1K680-104	1	1B001-091-2		△	
362	1K680-106	1	1B001-102-6	10	o△	
219	1K640-261	1	1B660-005-8	7	o△	

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
372	1K680-107	1	1B060-022-2		Δ	
495	1K680-110	1	1B206-004	1	o Δ	P33FB#495
511	1K680-111-1	1	1B060-026-7		Δ	
252	1K680-112-1	1		8	o	
259	1K680-113	1	1B100-071		Δ	35FB#259-1
249	1K680-124	1	1B060-027-3	8	o Δ	
2408	1K680-169	1	1B060-034-4	2	o Δ	P33FB#408
2413	1K680-170	1		3	o	P33FB#413-6
2471	1K680-171	1	1B001-131		Δ	P33FB#534-6
2489	1K680-172-1	1		11	o	

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補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
1011	1S237-002	1	1B060-027-3		Δ	
1012	1S250-002	2	1B060-027-3		Δ	35FB#258
1013	1S260-004-1	1	1B060-027-3		Δ	
1014	1S260-005	1	1S005-002		Δ	
1021	1S310-009	1	1B060-027-3		Δ	3.3MΩ 1/8W
1022	1S310-010	1	1B060-027-3		Δ	39KΩ 1/8W
1023	1S310-011	1	1B060-027-3		Δ	82KΩ 1/8W
1024	1S310-012	1	1B060-027-3		Δ	4.7KΩ 1/8W
1031	1S322-006	1	1B060-027-3		Δ	47KΩ 0.15W
552	1S322-003-1	1	1B060-026-7		Δ	P33FB#680G
1033	1S322-007	2	1B060-027-3		Δ	10KΩ 0.15W
1045	1S335-011	1	1B060-027-3		Δ	2200PF 25V
1041	1S340-006	1	1B060-027-3		Δ	6.8μF 6.3V
1042	1S340-007	1	1B060-027-3		Δ	1.5μF 10V
1043	1S340-008	1	1B060-027-3		Δ	3.3μF 16V
1044	1S340-009	1	1B060-027-3		Δ	10μF 16V
70	1S700-009	1	1S007-010		Δ	
549	1S705-002-1	1	1B060-026-7		Δ	
550	1S705-003-1	1	1B060-026-7		Δ	

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
1001	1S705-004-1	1	1B060-027-3		Δ	
1002	1S705-005	1	1S005-002		Δ	35FB #109
2488	1S705-009	1	1B060-034-4		Δ	
1051	1S810-055	1	1B060-021	11	x	W-0056RE
1052	1S810-056	1		12	x	W-0056BK
1053	1S810-057	1	1B060-021	11	x	W-0056RE
1054	1S810-058	1		12	x	W-0056BE
1055	1S810-059	1	1B001-091-2	12	x	W-0056GN
1056	1S810-060	1	1B060-034-4	2	x	W-0056PU
1057	1S810-061	1			x	W-0056WH
1058	1S810-062	1		12	x	W-0056WH
1060	1S810-064	1	1S007-010		x	W-0056RE
1061	1S810-065	1	1B060-026-7		x	W-0056PU
1062	1S810-066	1	1B060-026-7		x	W-0056BK
1063	1S810-067	1	1B060-026-7		x	W-0056BN
1064	1S810-068	1	1B060-026-7		x	W-0056YE
1066	1S810-070	1	1B060-022-2		x	W-0056WH
1071	1S810-072	1		6	x	W-0056BE
1072	1S810-102	1	1B060-034-4	2	x	W-0056RE
1073	1S810-103	1	1B060-034-4	2	x	W-0056OE

部 品 表　Parts list

FAA14001-R.3110.A

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
602A	A1-17030FA	1		2	o	
601	A1-17015FB	2	1B660-005-8	8	o△	
634	A1-17018FB	1		12	o	
608A	A1-17022FC	1	1B660-005-8	7	o△	
608B	A1-17022FT	1		7	o	Black
602B	A1-17030FC	1		2	o	Black
603A	A1-17030FC	5		1	o	
624	A1-20030BX	2		11	o	
605	A1-20022FB	3		4	o	
604	A1-20025FB	1		12	o	
606	A1-20030FB	5		2,3	o	
607	A1-20070FT	1		11	o	
609	A2-17025FB	1	1B660-005-8	10	o△	
611	A2-17030FB	3		12,14	o	
610A	A2-17025FC	3		12	o	
613	B1-14015FB	2	1B100-070-1	8	o△	
614	B1-14020FB	2		8	o	
617	B1-17025FA	2	1B001-102-6	10,11	o△	

部 品 表 Parts list

FAA14001-R.3110.A

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
619	B1-17035FA	2	1B150-008-7	5 1	o△	
636	B1-17030FA	3	1B150-008-7	1	o△	
620	B1-17040FA	3		8	o	
637	B1-17020FB	2		8	o	
616	B1-17022FB	2	1B660-005-8	9	o△	
618	B1-17025FB	1	1B660-005-8	10	o△	
622	B1-20025FA	1		12	o	
626	B1-20050FA	3	1B060-034-4	8,2	o△	
658	B1-20030FB	1		5	o	
625	B1-20040FB	1		12	o	
627	B1-20045FB	2		11	o	
629	B2-20045FA	1		12	o	
635	E1-20028FB	1		8	o	
631	K2-14015FA	3		4	o	
632	K2-14025FA	2	1B060-026-7	5	o△	
633	K2-14025FB	2	1B100-070-1	8	o△	
573	P1-10080SX	1		6	o	

部 品 表　Parts list

FAA14001-R.3110.A

補助番号 Ckt.No.	部品番号 Part No.	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivey	備考 Remarks
G4	1G104-017	1	1B100-071		△	35FB#G4
G9	1G218-001-1	1	1B100-069-1		△	35FB#G9
G5	1G247-016	1	1B100-071		△	35FB#G5
G8	1G308-001	2	1B100-071		△	P33FB#G8
G3	1G415-002	1		8	o	P33FB#G3
G6	1G550-008-1	2	1B100-070-1	8	o△	P33FB#G6
G1	1G551-004-1	1	1B100-068-4	9	o△	P33FB#G1
G7	1G710-003	1	1B100-067-1		△	P33FB#G7
G2	1G950-001	1		8	o	35FB#G2-K

[2] 部組品一覧表 Assembly List

補助番号 Ckt. No.	部組品番号 Assembly No.	1台分個数 Pcs. per Unit	構成部品番号 Constituent Parts	参照図番 Figure	備考 Remarks.
B011	1B001-085	2	1K100-034 , 1K044-001	11	P33FB-#A2-1
B017	1B001-086	1	1K240-049 , 1K370-192 1K600-087	13	P33FB-#E2-1
B100	1B001-090-2	1		11	
B103	1B001-091-2	1	1K610-175 , 1K370-200-1 1K314-055-1 , 1K115-193 1K240-052 , 1K240-051 1K680-104 , 1K115-194 1K230-025-1 , 1S810-059	12	
B106	1B001-092	1	1K680-101 , 1K620-021×4 1K600-093	12	
B303	1B001-098-1	1	1K208-009 , 1K370-241-1 1K220-041 , 1K600-104 1K370-242 , 1K060-003	9	35FB-#B6-6
B306	1B001-099-1	1	1K620-032 , 1K370-244-1×4 1K240-068×2	9	35FB-B22-1
B307	1B001-100	1	1K600-095 , 1K370-247 1K370-203	9	
B322	1B001-102-6	1	1K610-192-1 , 1K314-059 1K366-013 , 1K640-191 1K314-060 , 1K314-062 1K370-210 , 1K314-063 1K370-211 , 1K370-212 1K260-008-1 , 1K370-213 1K260-010-2 , 1K260-011-1 1K370-214 , 1K370-216 1K314-065 , 1K366-012 1K370-220 , 1K370-245 1K370-246 , 1K230-029 1K050-050 , 1K370-215 1K060-003 , 1K060-004 1K120-052 , 1K314-064-1 1K230-030-1 , 1K225-043-1 1K225-044-2 , 1K230-032 1K230-033-1 , 1K230-034 1K115-196 , 1K600-096 1K050-020 , 1K680-106 1K115-197 , 1K050-024 B1-17025FA , 1B260-002-1 , 1B314-053-2 1B314-054-1	10	

補助番号 Ckt. No.	部組品番号 Assembly No.	1台分個数 Pcs. per Unit	構成部品番号 Constituent Parts	参照図番 Figure	備考 Remarks.
B502	1B001-106-1	1	1K240-066 , 1K640-250-1 1K370-355-1 ,	5	
B2201	1B001-127	1	1K370-367 , 1K130-097 1K220-039 , 1K050-074×2	4	P33FB-#A21-6
B2207	1B001-128-2	1	1K260-055-1 , 1K630-113 1K630-083 , 1K220-064 1K600-151 , 1K620-047 1K078-007×16 ,	4	P33FB-#A7-1
B2403	1B001-129-2	1	1K625-017-1 , 1K260-053 1K260-054 , 1K260-051 1K640-196 , 1K640-254 1K370-364 , 1K640-255 1K370-365×3 , 1K050-072 1K370-224 , 1K310-019 1K314-069 , 1K610-273 1K370-225 , 1K230-041 1K640-202 , 1K610-278 1K078-007×24 , 1K120-054 1K610-187 , 1K340-023	3	P33FB-#A11-6
B2404	1B001-130-1	1	1K610-272-1 1K370-366-1	3	P33FB-#A13-6
B2406	1B001-131	1	1K610-276 , 1K600-152 1K680-171 , 1K600-153 1K600-154	2	P33FB-#K1-6
B2203	1B001-132-1	1	1K370-368-1 1K230-044-1	3,4	
B105	1B060-021	1	1K680-103 , 1K240-050 1K370-197 , 1K610-174 1S810-057 , 1S810-055	11	
B311	1B060-022-2	1	1K680-107 , 1K240-056-1 1K240-057-1 , 1K600-097 1S810-070	9	

部組品一覧表 Assembly List

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補助番号 Ckt. No.	部組品番号 Assembly No.	1台分個数 Pcs. per Unit	構成部品番号 Constituent Parts	参照図番 Figure	備考 Remarks.
B510	1B060-026-7	1	1K010-017-2 , 1K370-233 1K277-003-1 , 1K260-017-1 1K245-001 , 1K640-206 1K240-062 , 1K620-022-1 1K150-010 , 1K078-008 1K267-002 , 1K267-001-1 1K201-012 , 1K470-003 1K220-043 , 1K160-183 1K470-005-1 , 1K120-055 1K248-003 , 1K260-018 1K314-072 , 1K277-004-1 1K160-195-1 , 1K120-056-1×2 1K240-061 , 1K010-016 1K340-025-1 , 1K610-193-1 , 1K370-234-1	5	
			1K370-235 , 1K260-019-1 1K370-237-2 , 1K370-236 1K630-089 , 1K680-111-1 1K370-232 , 1K240-063-1 1K233-015×6 , 1K240-072 1K115-200 , 1K640-205-1 1K248-002 , 1K246-005 1S705-002-1 , 1S322-003-1 1S810-065 , 1S705-003-1 1S810-067 , 1S810-066 K2-14025FA×2 , 1S810-068 1B470-001 , 1K240-071-2 1K001-012		
B1002	1B060-027-3	1	1K610-200 , 1K610-204 1K680-124 , 1S237-002 1S705-004-1 , 1S260-004-1 1S250-002×2 , 1S310-010 1S310-009 , 1S310-012 1S310-011 , 1S322-007×2 1S322-006 , 1S340-006 1S340-009 1S340-008 1S340-007 1S335-011	8	

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番品 Part No.	名称 Name
120	1K467-016	ターミナルキャップ Terminal cap	B012	1B400-001-1	シンクロターミナル Synch terminal
561	1K333-003	巻戻し軸受け Rewing shaft bearing	B027	1B314-049	巻戻しレバー Rewind crank
562	1K370-239	巻戻し軸 Rewind shaft			
563	1K201-013	巻戻しノブ Rewind knob			
565	1K225-045	巻戻軸受板用バネ Spring, rewind shaft acceptor			
566	1K240-064-1	レバー受けバネ Rewind crank spring			
570	1K050-023	平座金 Washer			
571	1K610-195	ロックレバー Lock lever, rewind shaft			
573	P1-10080SX	Pin			
606	A1-20030FB	Screw			
1071	1S810-072	Lead wire (blue)			
572	1K485-036	開閉ノブ Camera back knob			

補助番号 Ckt. No.	部組品番号 Assembly No.	1台分個数 Pcs. per Unit	構成部品番号 Constituent Parts	参照図番 Figure	備考 Remarks.
B2408B	1B060-051-3	1	1K146-018 1B060-034-4 (1K146-017を除く. exception:1K146-017),	2	Black
B2408A	1B060-034-4	1	1K610-274-1 , 1K340-040 1K370-369 , 1K370-370 1K370-371×2 , 1K314-106 1K370-372 , 1K001-012 1K146-017 , 1K640-253 1K150-008 , 1K230-039 1K680-169 , 1K610-270 1K314-080 , 1K230-079 1K610-275×6 , 1K610-277-1 1K470-011 , 1K230-076 1K150-017 , 1K330-007 1K260-049 , 1K260-050 1K610-267-1 , 1K314-105 1K230-077 , 1K610-268 1K275-009-1 , 1K480-005 1K060-013-1 , 1S705-009 1S810-102 , 1S810-103 1B001-131 , 1B206-004 1S810-060 B1-20050FA 1K123-051	2	
B025	1B100-067-1	1	1K233-014 1K400-076-1 1G710-003	1	P33FB-#C4
B310	1B100-068-4	1	1K610-177 1K240-054 1K240-055 1K370-217 1K115-220 1K600-094-1×2 1K370-205-2 1K370-204×4 1G551-004-1	9	
B314A	1B100-069-1	1	1K080-006 1G218-001-1	7	33FB-#B30-1
B327	1B100-070-1	1	1K610-201 1K610-202 1G550-008-1×2, B1-14015FB×2 K2-14025FB×2	8	33FB-#N1
B328	1B100-071	1	1K680-113 1K610-205×2 1K610-206 1K576-027×2 1K240-069 1K240-070 1K010-018×2 1G104-017 1G308-001×2 1G247-016	8	35FB-#N4
B314B	1B100-072-1	1	1K080-007 1G218-001-1	7	33FB-#B30-1 Black

補助番号 Ckt. No.	部組品番号 Assembly No.	1台分個数 Pcs. per Unit	構成部品番号 Constituent Parts	参照図番 Figure	備考 Remarks.
B2026A	1B150-008-7	1	1K620-018-1　1K115-180 1K630-080　1K640-190 1K370-363　1K040-001-1 1K115-293　1K400-077-1 1K220-036　1K625-007-1 1K400-079-1　1K640-189-1 1K248-001　1K115-181 1K406-012-1　1K240-045 1K240-046　1K360-007 1K610-166　1K030-001 1K206-002　1K160-180 1K160-181　1K160-182 B1-17035FA　1S005-002 1B240-003　1B680-006-1 B1-17030FA×3　1B100-067-1 1K115-297	1	
B2026B	1B150-009-7	1	1K620-034-1　1K400-082 1K240-073 1B150-008-7 (1K620-018-1 1K400-079-1, 1K240-045 を除く, exeception:1K620-018-1 1K240-045,1K400-079-1)	1	Black
B305	1B206-002-1	1	1K610-178-1	9	35FB-#309
B324	1B206-003	1	1K625-006	8	
B407	1B206-004	1	1K206-001　1K610-185 1K680-110　1K010-019×2	1	35FB-#P3-1
B023	1B240-003	1	1K240-047	1	P33FB-#71-1
B319	1B260-002-1	1	1K640-192　1K260-009-1	10	

補助番号 Ckt. No.	部組品番号 Assembly No.	1台分個数 Pcs. per Unit	構成部品番号 Constituent Parts		参照図番 Figure	備考 Remarks.
B206A	1B300-007	0~1	1K625-008 1K630-087	1K370-227 1K600-101	4	P33FB-#A10A
B206B	1B300-008-2	0~1	1K625-008-1 1K630-087	1K370-227 1K600-102-1	4	P33FB-#A10B
B206C	1B300-009	0~1	1K625-009 1K630-087	1K370-227 1K600-101	4	P33FB-#A10C
B206D	1B300-010-2	0~1	1K625-009-1 1K630-087	1K370-227 1K600-102-1	4	P33FB-#A10D
B312	1B310-019	1	1K370-195 1K600-088		8	
B313	1B310-020	1	1K310-020 1K370-238		9	
B027	1B314-049	1	1K625-010 1K370-240	1K201-014	6	35FB-#H1-1
B104	1B314-051	1	1K314-054	1K370-198 1K370-199	4	
B304	1B314-052-1	1	1K314-057-1 1K370-206		9	
B320	1B314-053-2	1	1K314-061-1 1K370-218 1K115-195	1K370-208 1K366-011-1	10	
B321	1B314-054-1	1	1K314-058 1K370-209	1K370-207-1	10	
B2101	1B314-056-2	1	1K314-104-1 1K680-097-1 1K600-086	1K366-010 1K240-048	11	
B204	1B340-001-2	1	1K640-201-1 1K640-202	1K640-196 1K078-007×8	4	P33FB-#A14
B012	1B400-001-1	1	1K400-016-1 1K370-042	1K370-043	6	S-8504
B030	1B467-007-1	1	1K467-017-1	1K630-082	12	P33FB-#P5
B508	1B470-001	1	1K470-004 1K625-011	1K640-207	5	
B019A	1B620-008-2	1	1K620-019 1K640-188 1K060-005-1	1K640-187 1K370-189	12	P33FB-#D-1
B700	1B610-012-2	1	1K610-269-1 1K115-323-1	1K115-322	14	

部組品一覧表 Assembly List

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補助番号 Ckt. No.	部組品番号 Assembly No.	1台分個数 Pcs. per Unit	構成部品番号 Constituent Parts		参照図番 Figure	備考 Remarks.
B019B	1B620-010-1	1	1K620-035 1K640-188 1K060-005-1	1K640-187 1K370-189		P33FB-#D-1 Black
B2016	1B620-014-2	1	1K620-046-2 1K600-079 1K370-177×2 1K610-280 1K362-014 1K370-181×3 1K680-098-1 1K115-154 1K115-156 1K123-034	1K370-193×4 1K370-176-1 1K240-033-1 1K370-179-1×2 1K610-163 1K362-007-1 1K115-301 1K115-155 1K115-157×2 1K220-031	13	
B2202	1B630-009	1	1K630-116 1K640-256	1K630-115	4	P33FB-#A8
B315	1B640-011-1	1	1K640-208-1 1K115-201		7	
B323A	1B660-005-8	1	1K660-015-1 1K115-191 1K404-030 K220-042 1K115-233×3 1K620-033 1K230-028 1K050-019 1K230-031-2 1K600-099 1K123-038 1K130-067 1K123-042×4 A1-17015FB×2 A2-17025FB B1-17025FB 1B001-098-1 1B206-002-1 1B001-100 1B060-022-2 1B100-069-1 1B001-102-6 1K050-029~1K050-048 1K640-261	1K115-187 1K610-170 1K240-065-1 1K630-090 1K240-067 1K115-203 1K120-051 1K130-058 1K050-022 1K230-035 1K123-039×4 1K120-092 A1-17022FC B1-17022FB×2 1B314-052-1 1B001-099-1 1B100-068-4 1B310-019 1B640-011-1 1B206-003	7 8 9	

補助番号 Ckt. No.	部組品番号 Assembly No.	1台分個数 Pcs. per Unit	構成部品番号 Constituent Parts	参照図番 Figure	備考 Remarks.
B323B	1B660-006-8	1	1K120-064 1B100-072-1 1B660-005-3 (1K120-092, 1D100-069-1 を除く. excertion: 1K120-092, 1B100-069-1)	7 . 8 . 9	Black
B022	1B680-006-1	1	1K380-007 1K370-191	1	35FB-#66
B1003	1S005-002	1	1S705-005 1S260-005	1	
B2102	1S007-010	1	1S700-009 1S810-064	11	

EXPLOSION DRAWINGS

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Pentagonal prism F15

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Body F21

Bottom Cover F23

Camera Back F25

Camera Back Hinge F27

総展開図
Drawing of Complete Camera Section

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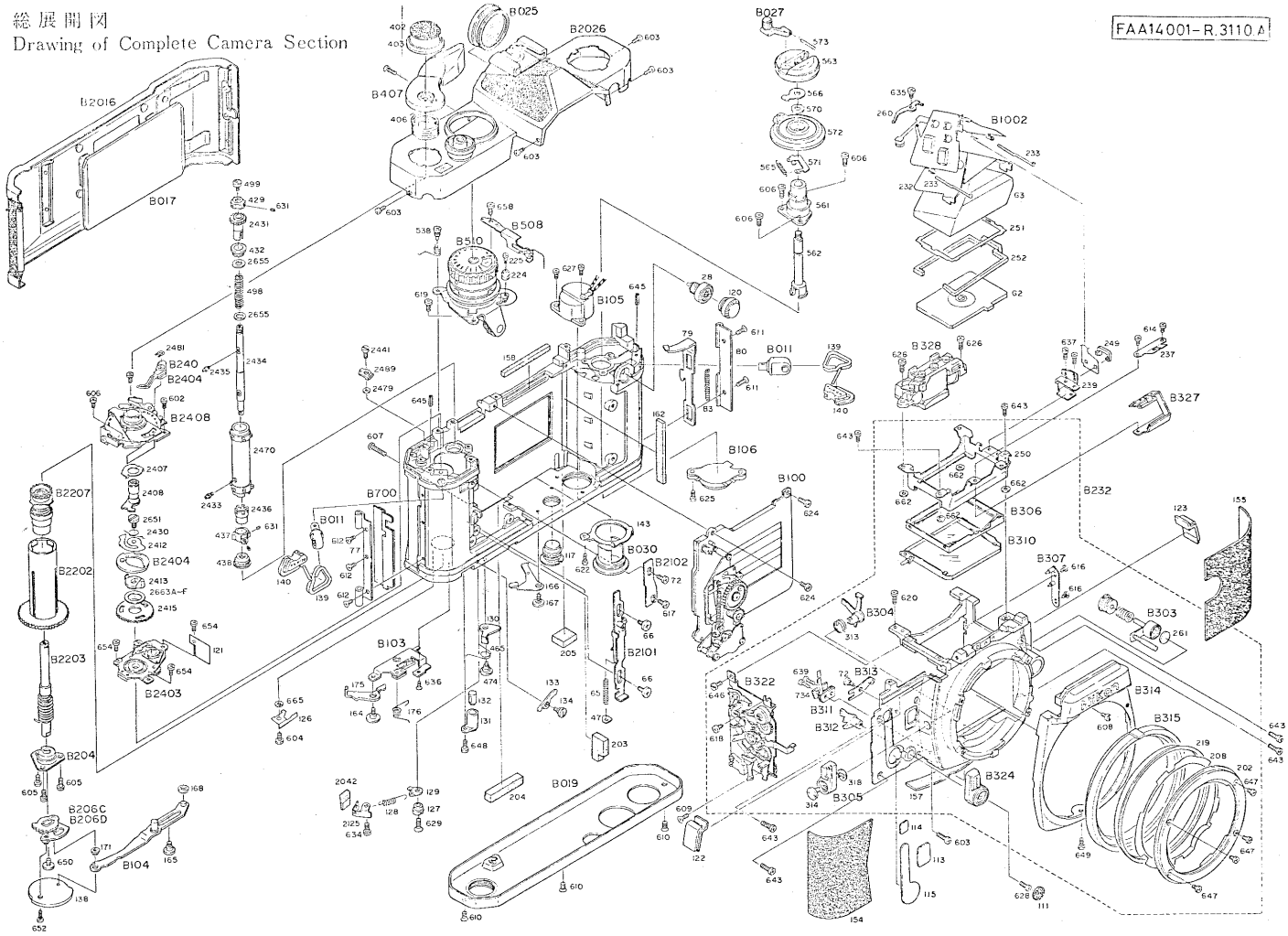
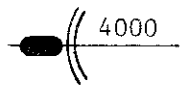
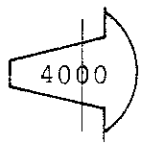


INSPECTION STANDARD FOR REPAIR

INSPECTION STANDARD FOR REPAIR

	Item	Standard	Tool
WINDING MECHANISM/SHUTTER RELEASE	Film advance lever torque	Film unloaded : 2.0 kg-cm or less Film loaded : 3.5 kg-cm or less	Torque meter
	Spool	Torque : 90 - 140g-cm Slipping load : 144 - 224g	J15003 J5019
	Sprocket	Play of the tips of sprocket teeth : 0.8mm or less Reverse action after winding: 1.2mm or less	J18064-1
	MD coupling	Start angle : -1° - 2° Wound angle : 132° - 138° Torque : Equivalent to those of film advance lever	Torque meter
	Rewind button	To be set : 2.7mm from the surface of bottom cover	Slide caliper
	Rewind knob torque	Film unloaded : 25 - 40g-cm	J5018
	Shutter button	Release power : 250 - 400g Whole stroke : 2.5 ± 0.3mm Release stroke : 0.4mm or less from the surface of button guide Switch ON stroke: 0.3mm or more from the surface of button guide	J5019
	MD plunger	Height from the surface of bottom cover : 0.5 +0.3mm -0.2mm Release power : 500g or less Release stroke from the surface of bottom cover: 3.4mm or less	Slide caliper
SHUTTER SPEEDS DELIVERY	Exposure time	See table below	Shutter tester J19033

Shutter speed	Upper limit	Standard	Lower limit
1	1320ms	1000ms	755ms
2	660	500	377
4	330	250	188
8	165	125	94
15	82.5	62.5	47
30	41.25	31.25	23.5
60	20.62	15.63	11.8
125	10.31	7.81	5.92
250	5.63	3.91	2.72
500	2.81	1.95	1.36
1000	1.41	0.98	0.68
2000	0.71	0.49	0.34
4000	0.36	0.25	0.174
X200	6.2	5.05	4.07

	Item	Standard	Tool
SHUTTER SPEEDS DELIVERY	Shutter speed difference (measured at the center of aperture plane) between two adjacent settings	1/500 - 1/1000 : 0.35ms or more 1/1000 - 1/2000 : 0.18ms or more 1/2000 - 1/4000 : 0.09ms or more	Shutter tester J19033
	Exposure variation	1 - 1/1000 : 0.3EV or less 1/2000 - 1/4000 : 0.5EV or less	
	Self-timer	Delayed action time : 8 - 14sec To be reset by reversing lever	Stop watch
	X contact	Time lag : 0.05 - 0.2ms Contact rate : 60% or more (1ms) Insulation : 30M or more	J19028-1 J9006
SHUTTER DIAL	Click out torque	600 ± 200g-cm	Torque meter
	Setting alignment	Shutter speeds : 	
		ASA :	
VIEWFINDER	Infinity focus	± 20" (Not to be varied after/before winding)	J18010 J19001
	Parallax error	0.5mm or less vertically/horizontally	
	Viewfinder coverage	93% or more	
	Viewfinder frame inclination	1° or less	
	LED	To be visible clearly Not to protrude in the view frame	
	Shutter speeds indication	To be visible clearly Not to excessively protrude in the view frame Not to incline by more than 5° against the side line of frame  a	

N.K.K. J-494 A4 1-2 2000 H

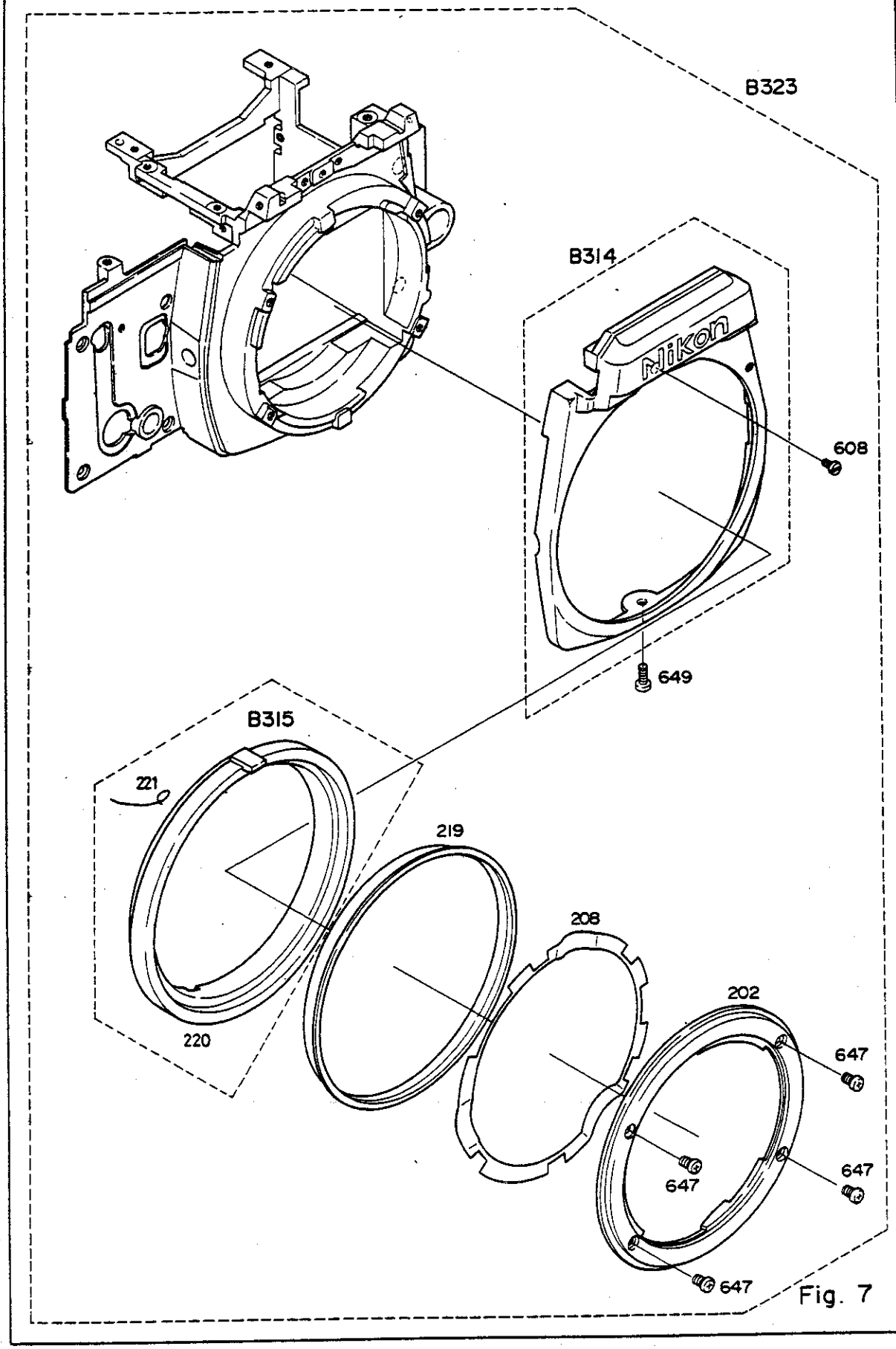
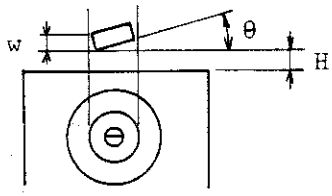
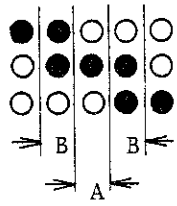

B323
B314
Nikon
608
649
B315
221
219
208
202
220
647
647
647
647

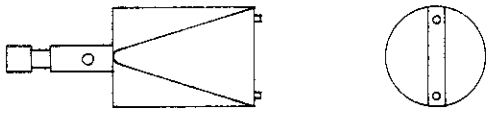
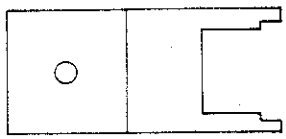
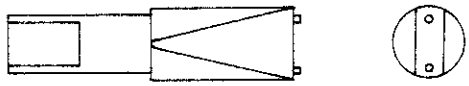
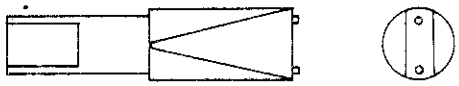
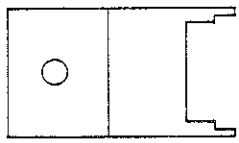
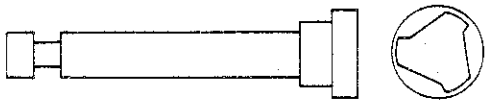
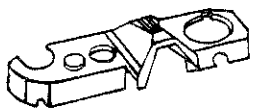
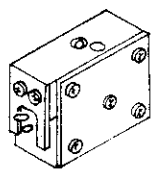
Fig. 7

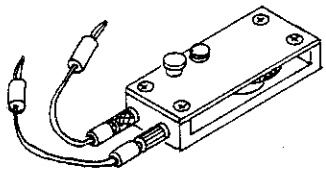
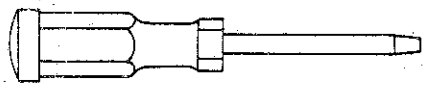
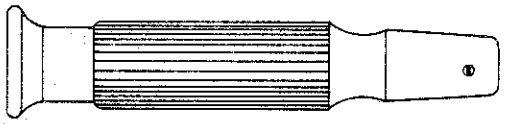
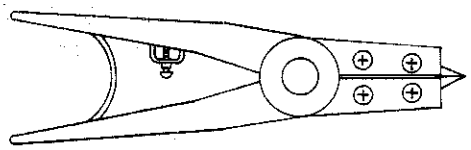
	Item	Standard	Tool
VIEWFINDER	ADR window position	Height (H) = 0.5W - 1.5W Inclination (0) = 2° or less 	
EXPOSURE METER ACCURACY	Ready-light LED	X200 - 1, B = Glowing 1/250 - 1/4000 = Blinking	J15147
	ASA setting	ASA 12 - 3200 settings should be checked at the combinations F1.4/B and F22/1/100.	
	Accuracy allowance ASA100	Brightness Cd/m² : 2 | 8 | 64 | 256 | 4096 EV : 4 | 6 | 9 | 11 | 15 F : 2.8 | 2.8 | 4 | 4 | 8 Shutter : 2 | 8 | 30 | 125 | 500 Level A : ± 0.5 EV Dead range : 0.3 - 0.5 EV Level B : 0.7 - 1.1 EV 	K=1.16 Light box Tool lens (50/1.4) J18072
LENS MOUNT	Aperture lever height	After mirror charge : 3.1 ± 0.1mm (0) Before mirror charge : 3.6mm or less Balance between before/after charge : 0.15mm or more Full stroke : 7.1mm or more Tension (mirror charged) : 90 - 120g	J18004
	Aperture coupling ring	Rotation angle : 52.5° - 112.5° Torque : 750g-cm or less (forward) 350g-cm or less (reversed)	J18063 J18058
	Metal back focus	46.67 ± 0.02mm Parallelness : 0.2mm	J18001-1 J19004

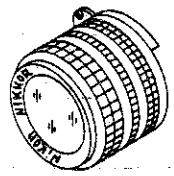
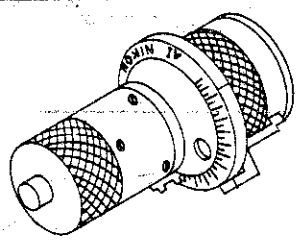
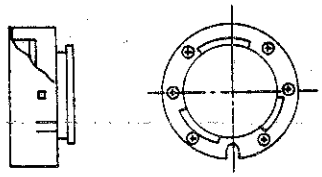
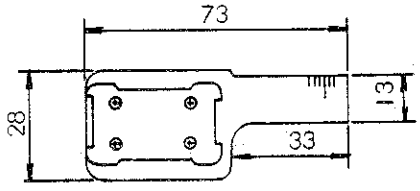
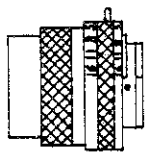
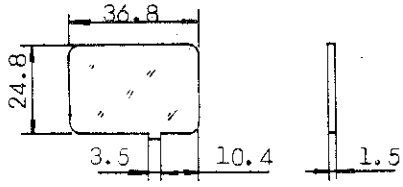
	Item	Standard	Tool
		Balance of height between internal and external film rails : 0.23 ± 0.02mm	
	Pressure plate	Leveling : 0.02mm or less	
	Battery checker	Battery checker LED turns on at 2.40V and off at 2.28V.	
	Meter-On duration	30 ± 10 sec. after finger is taken off the shutter release button	

TOOLS

(1) FM2用工具ゲージ一覧表 Tool List

工具番号 Tool No.	名称 Name	略図 Illustration	区分 Class.	備考 Commeon use
J11126	レバー押えネジ #403用 回螺器 Screwdriver (Film-advance lever)		A	FM, FE
J11118	スプロケット軸受 #438用 回螺器 Screwdriver (Spricket shaft lower bearing #438)		B	FM, FE
J11132	ダイアル上面ビス #536用 回螺器 Screwdriver (Shutter dial screw #536)		A	FM
J11135	絞りレバービス #314用 回螺器 Screwdriver (Aperture lever screw #314)		B	FM
J11139	レバー軸ナット #405用 回螺器 Screwdriver (Film-advance lever shaft nut #405)		B	FM, FE
J11155	スプロ制限カム #429用 回螺器 Screwdriver (Sprocket stopper sam #429)			FM, FE
J15138	爪受校正用 Tool top cover		A	FM用を加工 FM
J15147	ストロボ代用工具 Tool speed-light		B	FE

工具番号 Tool No.	名　称 Name	略　図 Illustration	区分 Class.	備　考 Commeon use
J15148	回路点検用工具電池 Tool buttery		A	FM, FE
J15135	高周波ドライバー High-frequency screwdriver		A	先端を加工して使用 When using modfy the tip
J 5127	回螺器ホルダー Screwdriver blade holder		A	
J 5272	ミラーアップレバー Gクリップ #299用回螺器 Pliers (G-snap ring #299 the mirror-up lever)		A	FM, FE

Tool No.	Name	Illustration	Class.	Common use
J18004	Aperture lever positioning gauge	Refer to tool instruction manual	B	All cameras
J18006	Test chart		C	
J18010	Standard lens 50mm f2		C	
J18033	Focusing screen tool		C	
J18037	Mirror 45° inspecting tool		A C	
J18041-1	Tool lens for shutter tester 50mm f1, 4		A	EL2 FM FE
J18042	Aperture lever depth gauge	Refer to tool instruction manual	C	All cameras
J18058	Torque gauge for AI lens & body		C	AI lenses FM EL2 FE
J18063	F-number window checking gauge		B	FM FE
J18064	Sprocket teeth positioning gauge		B	FM FE
J18065	F-number checking gauge		A	FM EL2 FE
J18070	45 degree positioning tool mirror		C	FE

(2) General purpose instruments

Tool No.	Title	Remarks	Usable other tool
J19033	Shutter tester	For 35mm focal-plane shutter camera	J19006-1
J19028-1	Megger	500MΩ	J19028
J19009-2	Brightness box		J19001-1 J19009-3 J19009-4 J19022-1
J9003-2	Digital multi-meter	Resolving power: 1μV/DCV	J 9003-3
J19001	Collimator (f=600mm, D=120mm)	With stand	J19001-1
J19004	Dial indicator (with stand)	Scale div. 0.01mm, stroke 5mm	
J19006	Test meter		
J9001-5	DC regurated power supply	0 — 18V variable, Max. 2A	J9001 J9001-1

LUBRICANT AND BINDING AGENT LIST 潤滑油・接着剤一覧表

LUBRICANTS 潤滑油

Oil 油	Usage 用途	Items number 番号	Items 商品名 Japanese 日本	Material Code No. 資材コード	Remarks 備考
Liquid oil 液体油	At a normal temperature 常温用	L 1212	日本石油 白スピンドル油 №5	E 205	
		L 1233	シエル石油 トナオイル #33	E 216	
		L 1309	モービル石油 モービルーブ HD80−90	E 223	
		L 1314	モービル石油 モービルーブ HD140	E 224	
	At a low temperature 低温用	L 2010	ウイリアム・エフ・ナイ(木村産業) アストロオイル	E 269	
		L 2113	三建化工 セバケイト D.O.S	E 274	
		L 2215	エクリプス・パイオニア エクリプス・パイオニア #10(ジャイロ油)		
		L 3016	理研製油 スクワレル LA−10	E 261	
		L 3025	理研製油 スクワレル M−1	E 262	
		L 3034	理研製油 スクワレル M−2	E 263	
		L 3044	理研製油 スクワレル M−5	E 264	
		L 3047	理研製油 スクワレル H−1	E 265	
Grease oil グリース	At a normal temperature 常温用	G 5201	社内調合		
		G 5204	社内調合		
		G 5214	社内調合		
		G 6053	日本鉱油 パーマルブ H1003	E 275	
		G 6252	出光興産 ダフニコロネックス 2	E 2836	
		G 6372	シエル石油 シエルアルバニア 2	E 218	
		G 6414	杉浦研究所 光学用グリース Z−2		
		G 6433	杉浦研究所 光学用グリース X−2	E 2837	
		G 7821	丸善石油 リマックス 2	E 225	
		G 8681	ロックレー(大東商事) オートリキモリ LM−81	E 277	
	At a low temperature 低温用	G 7100	理研製油 スクワグリース L−2	E 266	
		G 7811	日本鉱油 フォートルブ 024	E 272	
		G 7812	日本鉱油 フォートルブ 025		
		G 7813	社内調合	E 280	
		G 7814	協同油脂 マルテンプPS №1	E 267	
		G 7815	協同油脂 マルテンプPS №2	E 2844	
		G 7833	東レシリコーン シリコーンSH.33(F)グリース	E 2845	
		G 7848	日本石油 ユニテンプグリース	E 2846	
		G 7854	日本鉱油 パーマルブ C−1	E 2847	
		G 7855	日本鉱油 パーマルブ C−2	E 2848	
		G 7816	トーオーポリマー ホワイトグリースA	E 2842	FL-LUBE-A

LUBRICANTS 潤滑油

Oil 油	Usage 用途	Items number 番号	Items 商品名 Japanese 日本	Material Code No. 資材コード	Remarks 備考
Grease oil グリース	At a low temperature 低温用	G 7856	日本鉱油 パーマルブ C－3	E 2849	
		G 7862	日本鉱油 パーマルブ F－2		
		G 7866	日本鉱油 フォートルブ 023	E 271	
		G 7870	モービル石油 モービルグリース 28	E 2851	
		G 8181	社内調合	E 281	
		G 8610	ロックレー(大東商事) リキモリブースター LM－83	E 276	
		G 8613	ロックレー(大東商事) リキモリパウダー LM－13	E 2853	
		IJ-10	日本鉱油		

BINDING AGENTS 接着剤

Usage 用途	Items number 番号	Items 商品名 Japanese 日本	Material Code No. 資材コード	Remarks
For leather or rubber goods. 皮類，ゴム類	# 501	プライオボンド #30	E 154	
For make metal goods together with metal goods or glass with metal 一般金属相互 ガラスと金属	# 616	セメダインスーパー（家庭用） セメダイン#1500 （工業用）		
	# 648	セメダイン#1590ハイスーパー		
	# 621	セメダイン#1565	E 175	
	# 631	アラルダイト AT1	E 180	
	# 634	主剤 アラルダイト AY 101 硬化剤 ハードナー HY 951		
	#645HB, #645HE	DM K5	E 160	
For temporary adhesion in the process 工程上の仮止め	# 201	セラック オレンジ色，レモン色可	E 375	
	# 350	ねじロック 赤，白	E 157	
	# 410	ロックタイト（B/M黄，ST/L赤 SC/L紫，N/L青，	E 163 ～ E 166	
	# 921	アロンアルファ # 201	E 155	（20g入）
	# 922	アロンアルファ # 202	E 156	（20g入）
For replenishment 充填を主とする接着	# 503	ウェザーバンシーラー	E 185	
	# 506	スリーボンド №4		
	# 508	シラシール 3DW		
	# 515	KE45RTV	E 186	
	#646HB, #646HE	DM D6		
	#647HB, #647HE	DM K3		
	# 518	KE1202LTV		
	# 710	セメダイン1001	E 179	
	# 703	セメダイン1003		

Nikon

TECHNICAL INFORMATION

Product Name: Nikon FM2/FE2/FA

Repair manual:

Ref. No. FM2-840024

Date: September 1984

Subject: SHUTTER IMPROVEMENTS

RP information list: No. 8431

Quite a few reports have been received on the breakdown of 1/4000 sec. shutter incorporated in the FM2, New FM2, FE2 and FA cameras. As the shutter curtains of 0.02mm in thickness travel across the aperture at approx. 3.3ms, their blades can suffer a large stress to get warped during the travel. To ensure the durability of performance, the shutter has been improved five times as follows.

1. Modification of inner aperture frame from July 1982

   The upper wind-side corner of the inner aperture frame has been re-contoured to prevent the interference with the edge of closing curtain that travels with shaking between the aperture frames. See Figure 1.

2. Modification of honeycomb structure from August 1982

   One part of the honeycomb structure has been changed to reinforce the blade of closing curtain. See Figures 2 and 3.

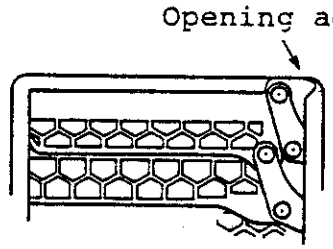


Figure 1

NIPPON KOGAKU K.K.
SERVICE DEPARTMENT
PHOTO PRODUCTS DIVISION
Fuji Bldg., 2-3, 3-chome, Marunouchi, Chiyoda-ku, Tokyo 100 Japan
Tel. (03) 214-5311. Telex: 02222950 (NIKON J) & J22601 (NIKON)

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番品 Part No.	名称 Name
202	1K404-030	バヨネット環 Bayonet	B314A	1B100-069	前カバー銘板 Front cover
208	1K240-065-1	バヨネットバネ Baynet spring	B314B	1B100-072	前カバー銘板 Front cover (black)
219	1K640-261	丸 環 Ring	B315	1B640-011-1	連動環 Coupling ring
220	1K640-208-1	連動環 Coupling ring	B323A	1B660-005-7	前 板 Front plate unit
608A	A1-17022FC	Screw	B323B	1B660-006-7	前 板 Front plate unit (black)
608B	A1-17022FT	Screw (Black)			
647	1K123-039	バヨネット止めビス Screw, bayonet			
649A	1K120-092	Screw			
649B	1K120-064	前カムビス Screw, front cover (black)			
221	1K115-201	連動ひも String, aperture coupling			

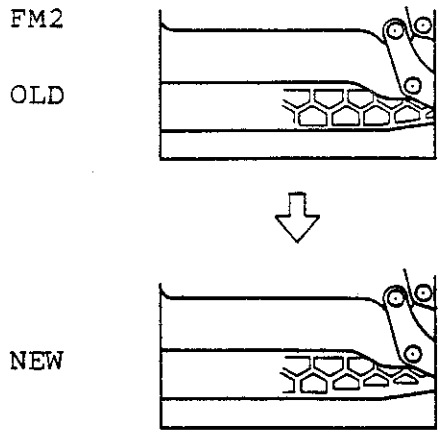


Figure 2

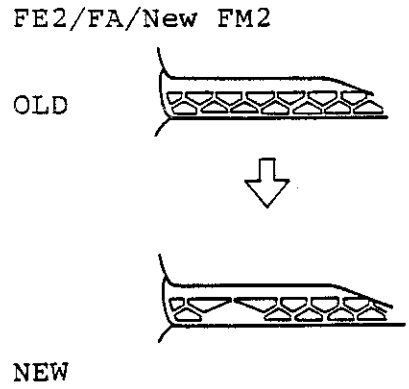


Figure 3

3. Change of material for closing curtain arm from February 1983

The material of closing curtain arm has been changed from titanium into carbon steel for reinforcement. See Figure 4.

4. Improvement of closing curtain brake from May 1983

A spring has been added to the closing curtain brake to increase the efficiency of braking. But this has not been applied to the former FM2 camera. See Figure 5.

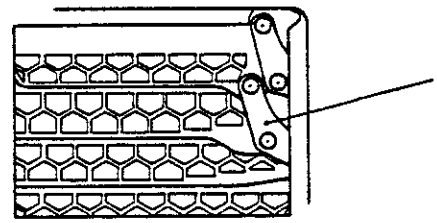


Figure 4

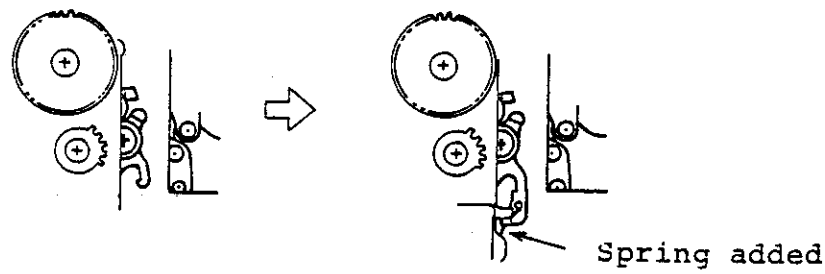


Figure 5

NIPPON KOGAKU K.K.

Fuji Bldg., 2-3, 3-chome, Marunouchi, Chiyoda-ku, Tokyo 100 Japan
Tel. (03) 214-5311. Telex: 02222950 (NIKON J) & J22601 (NIKON)
Cable: NIKKO TOKYO

5. Modification of rivets securing the blades from December 1983

   The rivets have been modified to prevent dislocation of shutter curtain blades. See Figure 6.

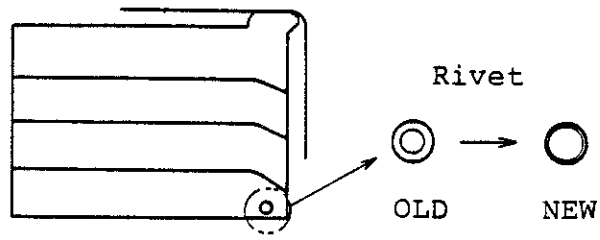


Figure 6

The above improvements have successfully leveraged the performance of 1/4000 sec. shutter for more than 100,000 shutter releases. But it is our judgement that, in most cases of the breakdown ever encountered, the shutter curtains may have been deformed by touching or probing with a photographer's finger. A customer education should be continuously given on the careful handling of the very thinnest shutter curtains.

SHUTTER CURTAIN BLADE REPLACEMENT AVAILABLE

To save the replacement of whole shutter unit even in the case of shutter curtain breakdown, spare curtains are made available now. When a camera is received for repairs, the shutter curtain blades can be replaced in accordance with the following procedures.

1. Check if the spare curtain blade is precisely flat, before installing.

2. See the illustration attached to disassemble/reassemble the shutter unit. The parts illustrated are of improvements. If a different pre-improved part is found in the unit of previous FM2 camera, it should be replaced in addition to the spare curtain blades. A junk shutter unit available should be disassembled to obtain the parts in need.

3. After reassembling, install the shutter unit in the camera body temporarily to check the shutter speed delivery. Set M250 when checking the FE2 and FA cameras.

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4. Use a pensil to write the mark " Ⓡ " and the date of repair on the aperture plate. It will give a reference for future repair. See Figure 7.

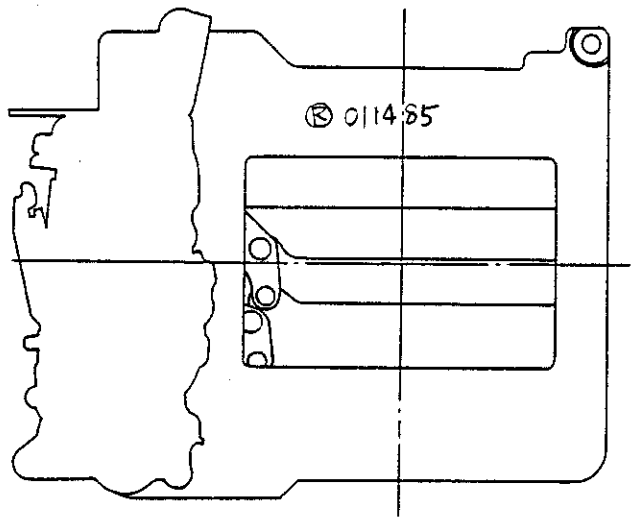

Figure 7.

PARTS ORDER REFERENCE

Product	Part Number	Name	FOB Price
Nikon FA	1B999-018	Opening shutter curtain	US$4.00
	1B999-019	Closing shutter curtain	4.00
Nikon FE2	1B999-018	Opening shutter curtain	4.00
	1B999-019	Closing shutter curtain	4.00
Nikon FM2	1B999-016	Opening shutter curtain	4.00
	1B999-017	Closing shutter curtain	4.00
New FM2	1B999-018	Opening shutter curtain	4.00
	1B999-019	Closing shutter curtain	4.00

It is desirable to replace both opening shutter curtain and closing shutter curtain at a time.

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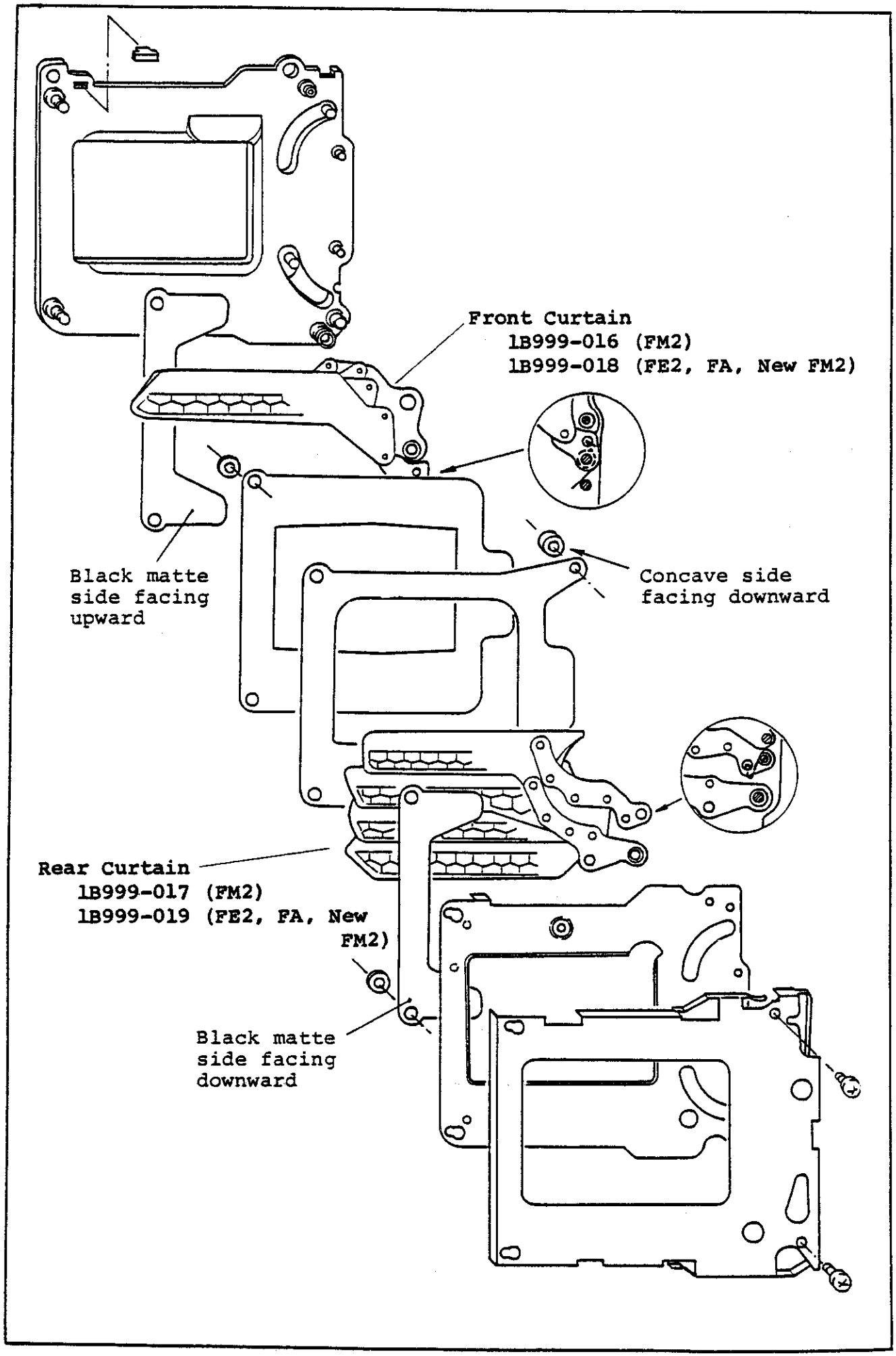
Cable: NIKKO TOKYO


Front Curtain
1B999-016 (FM2)
1B999-018 (FE2, FA, New FM2)
Black matte side facing upward
Concave side facing downward
Rear Curtain
1B999-017 (FM2)
1B999-019 (FE2, FA, New FM2)
Black matte side facing downward

ペンタプリズム部 Pentagonal prism

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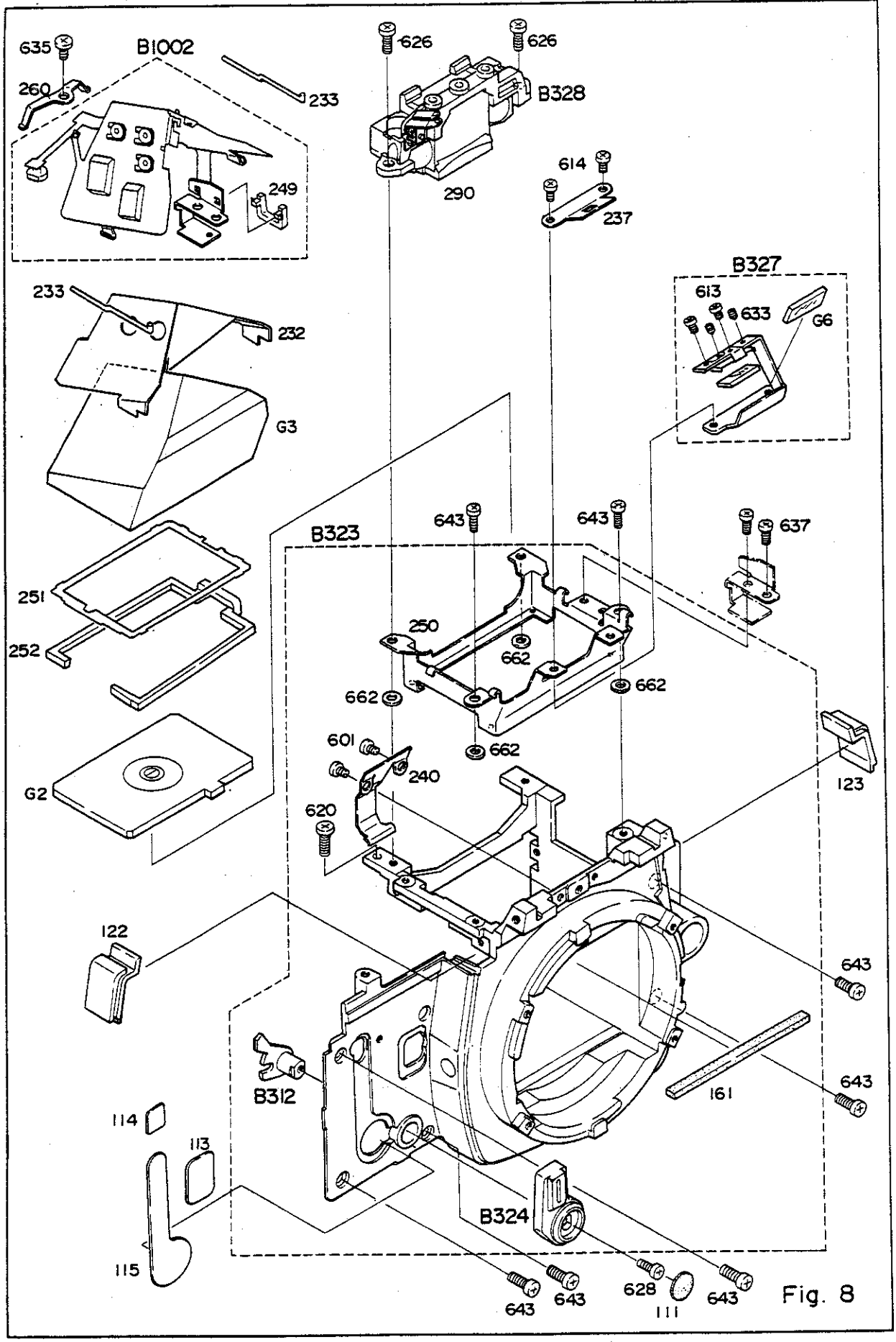

Fig. 8

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
111	1K115-183	セルフ皮 Leatherette, self-timer	633	K2-14025FB	Set screw
113	1K600-089	前板孔カバーA Cover A, front plate	635	E1-20028FB	Screw
114	1K600-090-1	前板孔カバーB Cover B, front plate	637	B1-17020FB	Screw
115	1K600-091	前板孔カバーC Cover C, front plate	643	1K123-042	前板取付ビス Screw, front plate
122	1K680-099	前板右肩カバー Shoulder block, front plate (rewind-side)	662	1K050-029～048	調整座金 Spacer
123	1K680-100	前板左肩カバー Shoulder block, front			
161	1K115-191	ミラーアップ受けモルト Sponge strip, mirror	G2	1G950-001	フレネルKタイプ Focusing screen K
232	1K115-202	プリズム押えシート Retainer, prism	G3	1G415-002	プリズム Pentagonal prism
233	1K233-016-1	プリズム押えバネ Prism retainer spring	G6	1G550-008-1	反射ミラー ADR mirror
237	1K610-203	枠板 ADR mask			
240	1K240-067	スクリーンロックばね Spring, focusing screen lock	B312	1B310-019	セルフレバー軸 Self-timer lever axle
249	1K680-124	プリント板押え Circuit board retainer	B323A	1B660-005-7	前板 Front plate unit
250	1K620-033	プリズムボックス Prism box	B324	1B206-003	セルフレバー Self-timer lever
251	1K576-025-1	視野枠 Finder field frame	B327	1B100-070-1	ミラー保護幕板 ADR mirror holder
252	1K680-112-1	中間枠 Spacer, screen frame	B328	1B100-071	接眼モールドメガネ Eyepiece mold
260	1K240-074	SPDプリント板押え SPD circuit board retainer	B1002	1B060-027-1	IC プリント板 IC circuit board
290	1K010-018	接点ビス Screw	B323B	1B660-006-1	前板 Front plate unit (black)
601	A1-17015FB	Screw			
613	B1-14015FB	Screw			
614	B1-14020FB	Screw			—
620	B1-17040FA	Screw			
626	B1-20050FA	Screw			
628	1K123-038	セルフビス Screw, self-timer			

前板部 (1) Front plate

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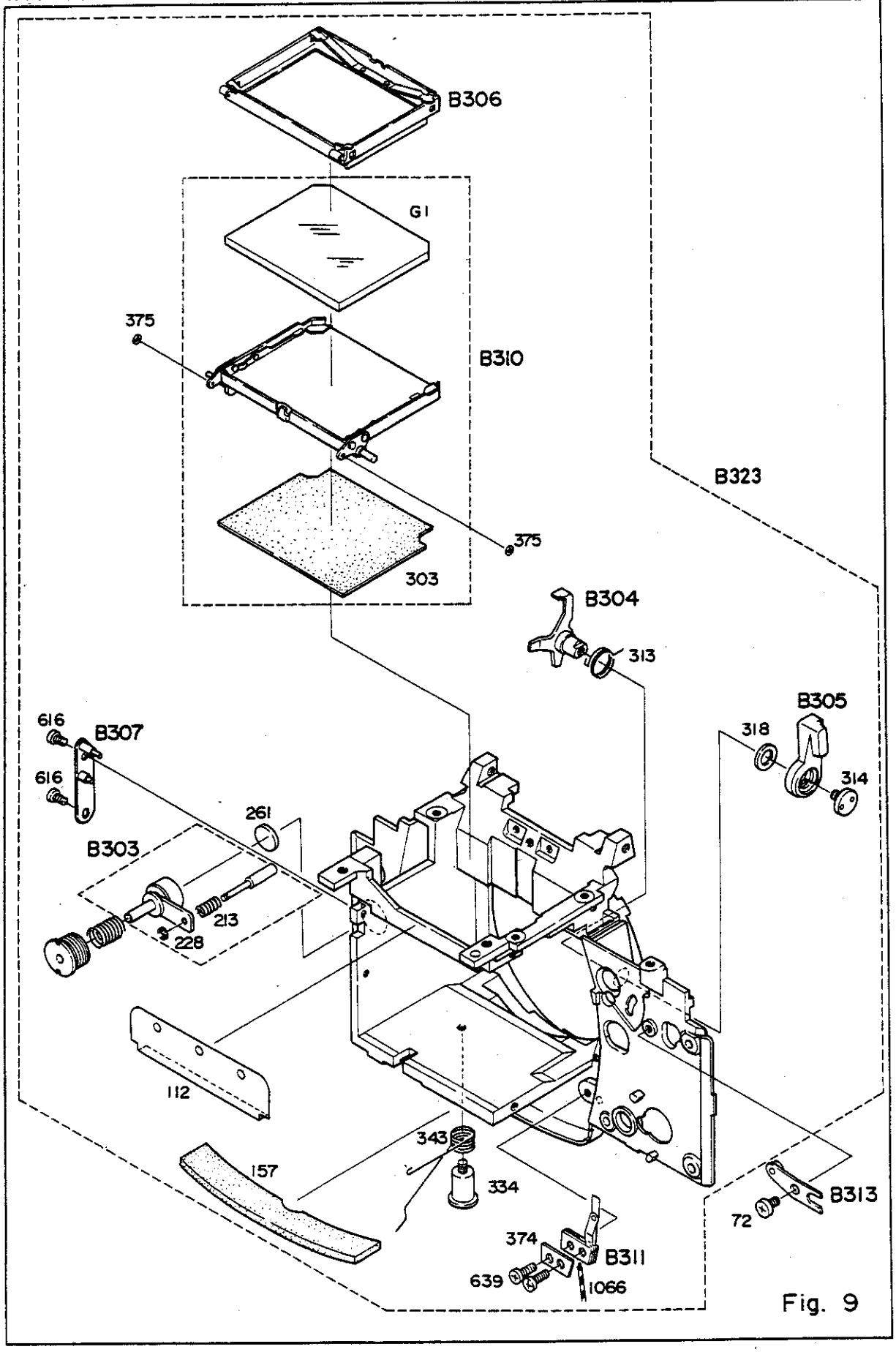

Fig. 9

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
72	1K130-053	プリント板ビス Screw, circuit board B2102	B303	1B001-098-1	着脱釦 Lens release button
112	1K610-170	遮光板 Light-tight	B304	1B314-052-1	手動絞りレバー Manual stop-down lever
157	1K115-187	上蓋用モルトプレン Light-tight	B305	1B206-002-1	絞り込みレバー Stop-down lever
213	1K220-041	着脱ピン押えバネ Lens release spring	B306	1B001-099-1	スクリーン枠 Focusing screen frame
			B307	1B001-100	軸基板 Mirror axle base unit
			B310	1B100-068-4	チリトリ Mirro holder
228	1K060-003	E-リング E-ring	B311	1B060-022-2	スイッチ接片 Shutter switch
261	1K115-203	レンズ着脱釦飾り Cover, lens release button	B313	1B310-020	レリーズ調整レバー Release adjusting lever
303	1K115-220	植毛紙 Baffle cloth	B323A	1B660-005-8	前板 Front plate
313	1K230-028	手動絞りレバーばね Stop-down lever spring	B323A	1B660-006-8	前板 Front plate (black)
314	1K120-051	絞りレバービス Screw, aperture lever			
318	1K050-019	手動絞りレバー座 Base, stop-down lever			
334	1K130-058	ばねビス Screw, mirror down spring			
343	1K230-031-2	ダウンレバーバネ Mirror down spring			
374	1K600-099	シャッタースイッチ押え板 Shutter switch retainer			
375	1K050-022	Washer			
616	B1-17022FB	Screw			
639	1K120-057	ミラースイッチ止めビス Screw, mirror switch			
G1	1G551-004-1	ミラー Mirror			

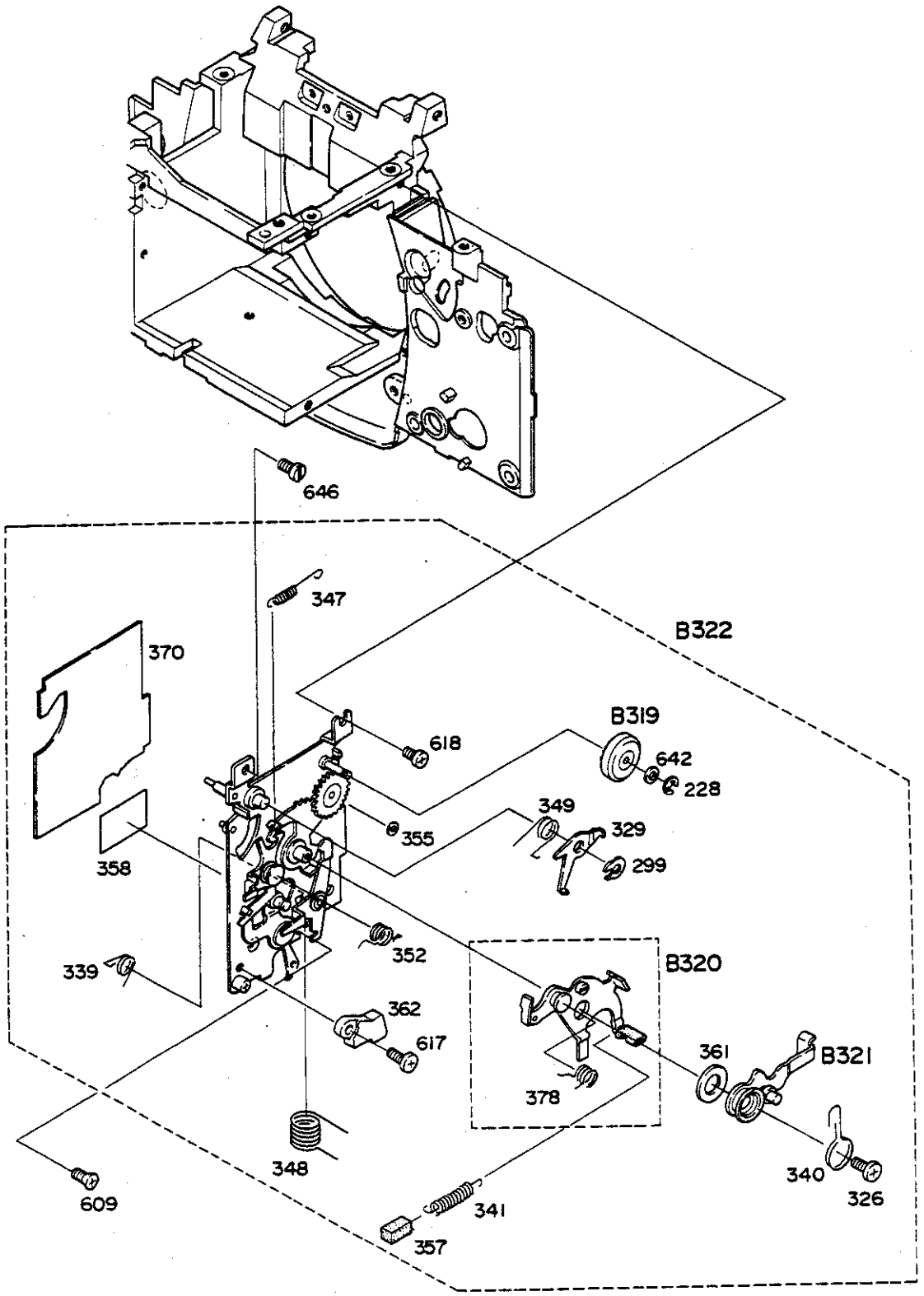
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Fig. 10

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
228	1K060-003	E-snap ring	B320	1B314-053-2	ミラーアップレバー Mirror-up lever
299	1K060-004	G-snap ring	B321	1B314-054-1	絞りレバー Aperture lever
326	1K120-052	Screw	B322	1B001-102-6	横基板 Mirror box mechanism
329	1K314-064-1	ミラーアップ押えレバー Mirror-up stop lever	B319	1B260-002-1	平歯車 Gear
339	1K230-029	45°ストッパーバネ 45° stopper spring			
340	1K230-030-1	絞りレバーバネ Aperture lever spring			
341	1K225-043-1	アップバネ Spring, mirror-up lever			
347	1K225-044-2	慣性体バネ Spring, mirror mechanism gear			
348	1K230-032	レリーズレバーバネ Release lever spring			
349	1K230-033-1	ミラーアップ押えバネ Spring, mirror-up stop lever			
352	1K230-034	係止レバーバネ Spring, latch lever			
355	1K050-050	Washer			
358	1K600-096	横基板カバー Cover, mirror box mechanism			
357	1K115-196	防しんモルト Sponge strip			
362	1K680-106	ダウンレバーかんしょう板 Shock absorber, mirror-down lever			
370	1K115-197	植毛紙 Baffle cloth			
361	1K050-020	Washer			
378	1K230-035	チリ取りバネ Spring, mirror-up lever			
609	A2-17025FB	Screw			
617	B1-17025FA	Screw			
618	B1-17025FB	Screw			
642	1K050-024	Washer			
646	1K130-067	側面基板止めビス Screw, mirror mechanism unit			

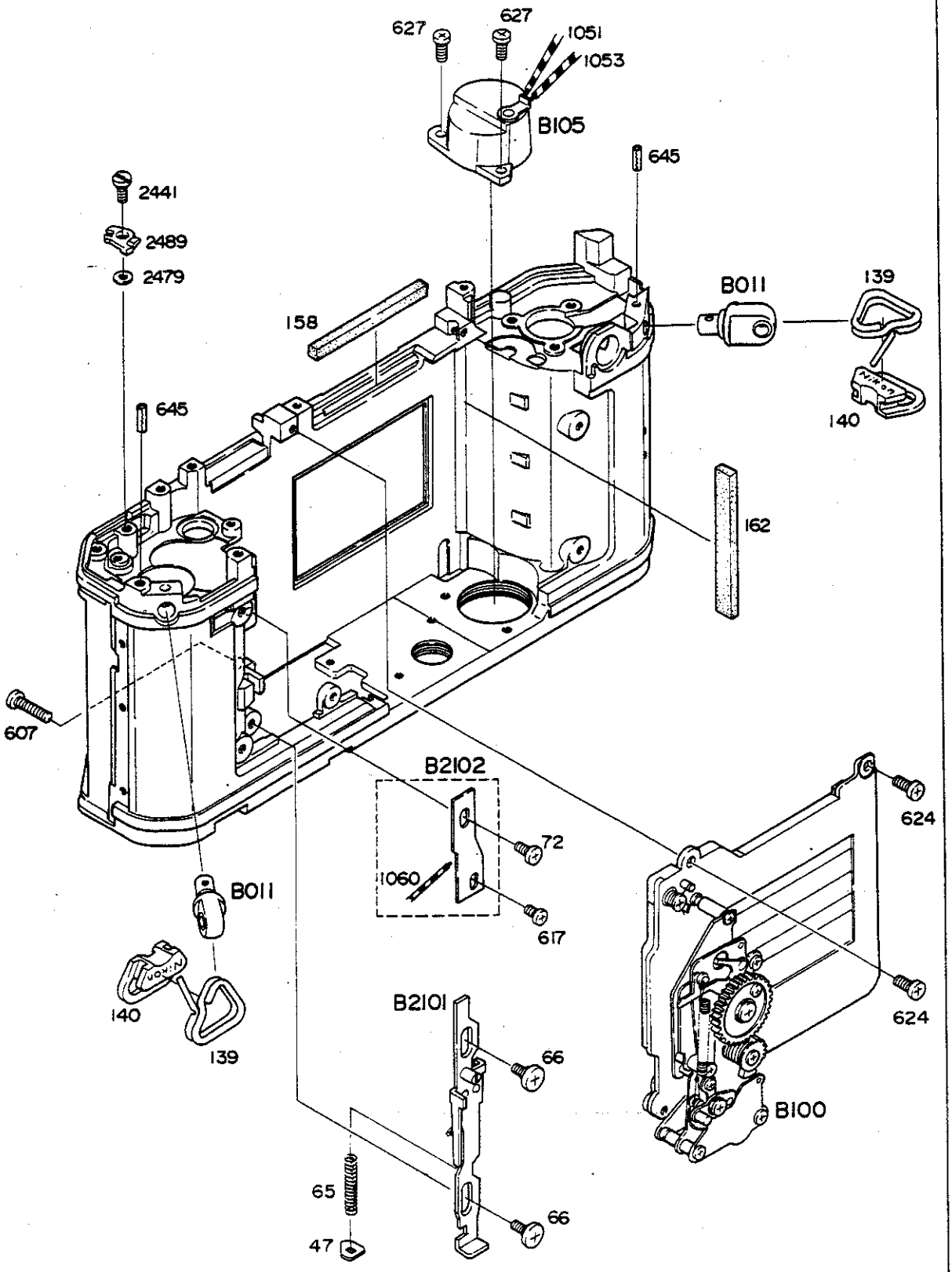
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Fig. 11

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
47	1K600-130	制限コマ Retainer, spring #65	B011	1B001-085	耳環 Eyelet
65	1K220-037-1	レリーズ板バネ Spring, release plate	B100	1B001-090-2	シャッター Shutter
66	1K130-052	レリーズ板ビス Screw, release plate	B105	1B060-021	電池ケース Battery chamber
72	1K130-053	プリント板ビス Screw, circuit board B2102	B2101	1B314-056-2	レリーズ板 Release plate
139	1K100-035	三角環 Neckstrap ring	B2102	1S007-010	半押しプリント板 Circuit board, meter switch
140	1K080-005	銘板 Neckstrap protector			
158	1K115-188	接眼下部遮光モルト Light-tight, eyepiece			
162	1K115-192	シャッター上遮光モルト Sponge strip, eyepiece			
607	A1-20070FT	Screw			
617	B1-17025FA	Screw			
624	A1-20030BX	Screw			
627	B1-20045FB	Screw			
645	1K044-003	スプリングピン Spring pin			
1051	1S810-055	Lead wire (Red)			
1053	1S810-057	Lead wire (Red)			
1060	1S810-064	Lead wire (Red)			
2441	1K130-098	面カム外しレバー軸 Clutch cam release lever axle			
2479	1K050-073	面カム外しレバー座金 Washer, axle #2441			
2489	1K680-172-1	二羽根爪外しレバー Coupling lever, multi-exposure			

ボディ底部 Bottom cover

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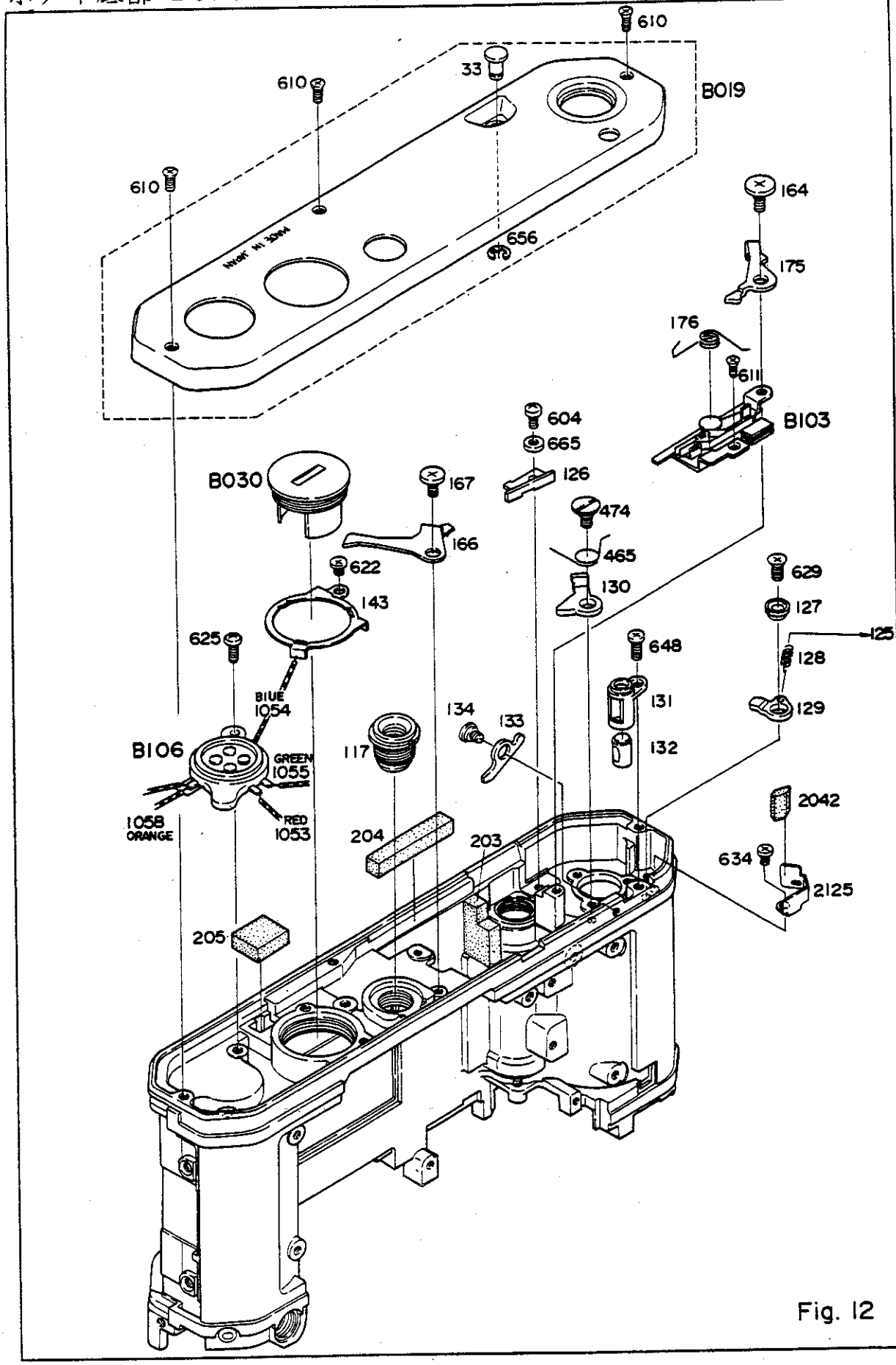

Fig. 12

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
33	1K370-189	巻戻釦 Rewind button	610A	A2-17025FC	Screw
117	1K400-078	三脚座 Tripod socket	610B	1K001-006	Screw (black)
126	1K610-172	ARレバー AR lever	611	A2-17030FB	Screw
127	1K650-003	振り子偏心軸 Pendulum eccentric axle	622	B1-20025FA	Screw
128	1K225-042-1	振り子ばね Pendulum spring	625	B1-20040FB	Screw
129	1K314-051-1	振り子 Pendulum	629	B2-20045FA	Screw
130	1K314-052-1	ロックレバー Lock-lever, MD see-saw lever	634	A1-17018FB	Screw
131	1K340-018	MD軸受け MD shaft bearing	648	1K123-040	ビス Screw, MD shaft holder
132	1K370-196	MD軸 MD shaft	656	1K060-005-1	E-snap ring
133	1K600-092	MDシーソーレバー MD see-saw lever	1053	1S810-057	Lead wire (red)
134	1K130-054	MDシーソーレバー軸 Axle, MD see-saw lever	1054	1S810-058	Lead wire (blue)
			1055	1S810-059	Lead wire (green)
143	1K610-173	電池アース Battery chamber earth contact	1058	1S810-062	Lead wire (white)
164	1K130-055	二重巻上防止ビス Screw, lever #175	2042	1K110-082	緩衝ゴムA Shock absorber A
166	1K314-053	ミラーチャージレバー Mirror charge lever	2125	1K610-266-1	緩衝板 Shock absorber
167	1K130-057	ミラーチャージレバービス Screw, mirror charge lever	665	1K050-039	Spacer
175	1K314-056	二重巻上防止レバー Lever, double-exposure preventing			
176	1K230-025-1	二重巻上防止バネ Spring, double-exposure preventing	B030	1B467-007-1	電池キャップ Battery chamber lid
203	1K115-355	モルトフレン Light-tight	B103	1B001-091-2	MDスイッチ基板 MD switch circuit board
204	1K115-356	モルトフレン Light-tight	B019A	1B620-008-2	底蓋 Bottom cover (black)
205	1K115-357	モルトフレン Light-tight	B019B	1B620-010	底蓋 Bottom cover (black)
465	1K230-043	ロックレバーバネ Lock lever spring	B106	1B001-092	外部接点 MD external contact
474	1K130-063	ロックレバー軸 Lock lever axle			
604	A1-20025FB	Screw			

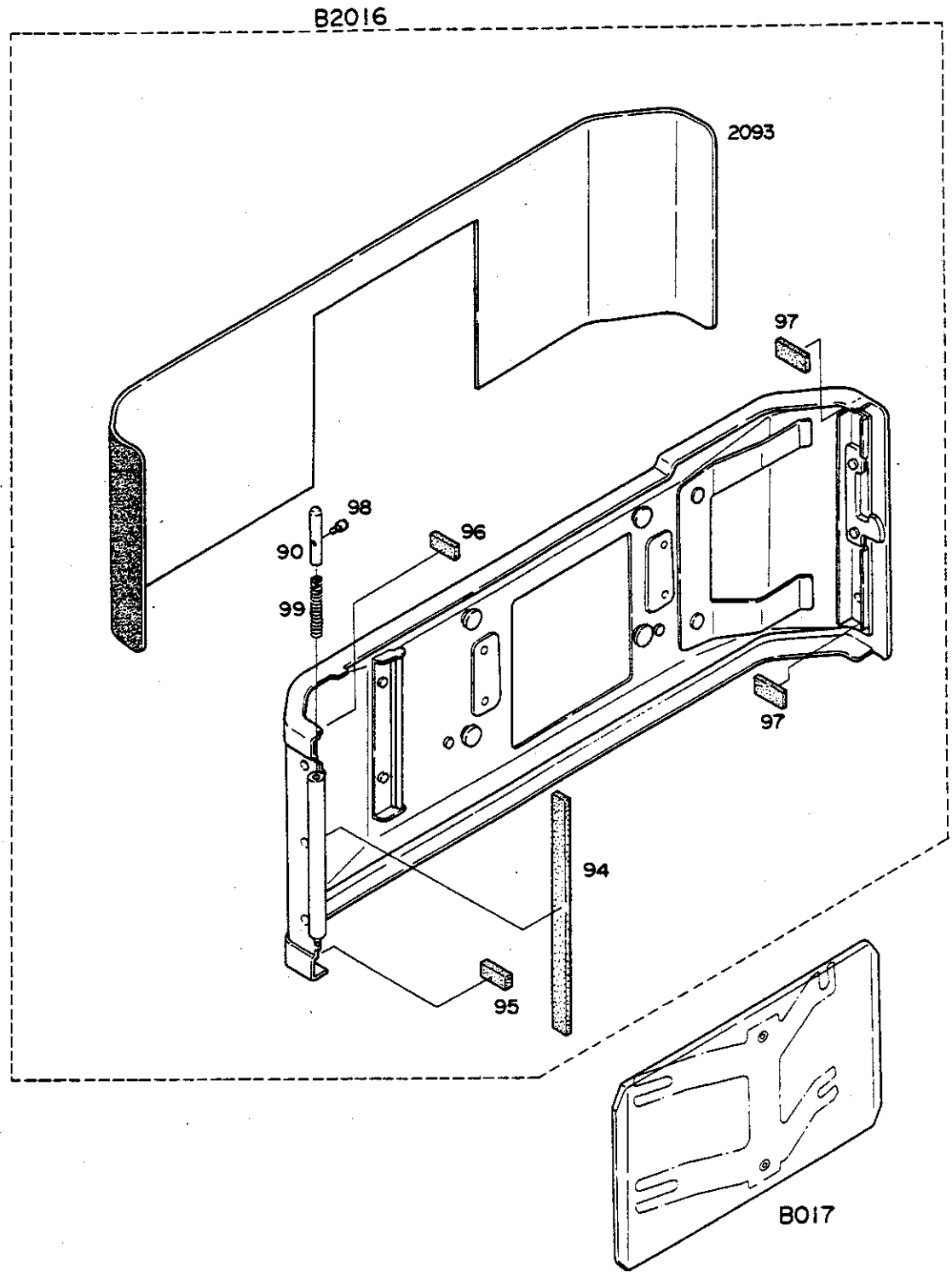

Fig. 13

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番品 Part No.	名称 Name
90	1K362-007-1	蝶番心金B Hinge shaft B	B017	1B001-086	圧板 Pressure plate
94	1K115-154	モルトプレン Light-tight	B2016	1B620-014-2	裏蓋本体 Camera back
95	1K115-155	モルトプレン Light-tight			
96	1K115-156	モルトプレン Light-tight			
97	1K115-157	モルトプレン Light-tight			
98	1K123-034	裏蓋着脱ピン Camera back release pin			
99	1K220-031	裏蓋着脱バネ Cameral back release spring			
2093	1K115-301	擬革 Leatherette			

蝶番、止め爪 Camera back hinge

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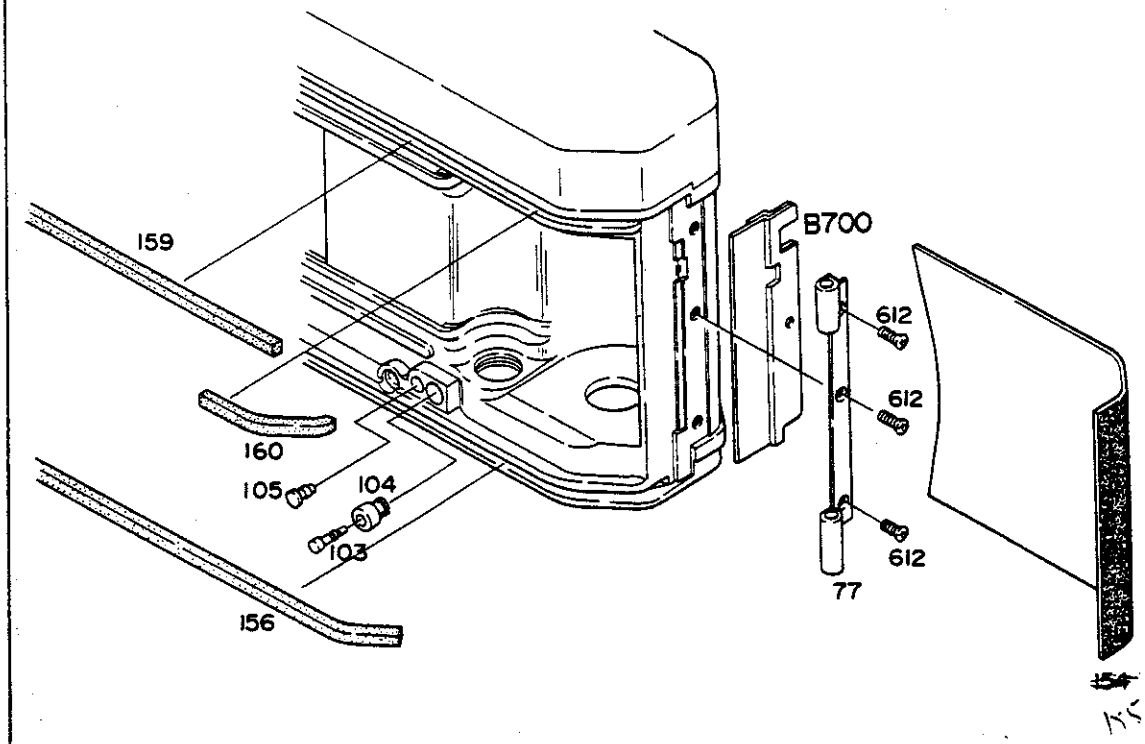

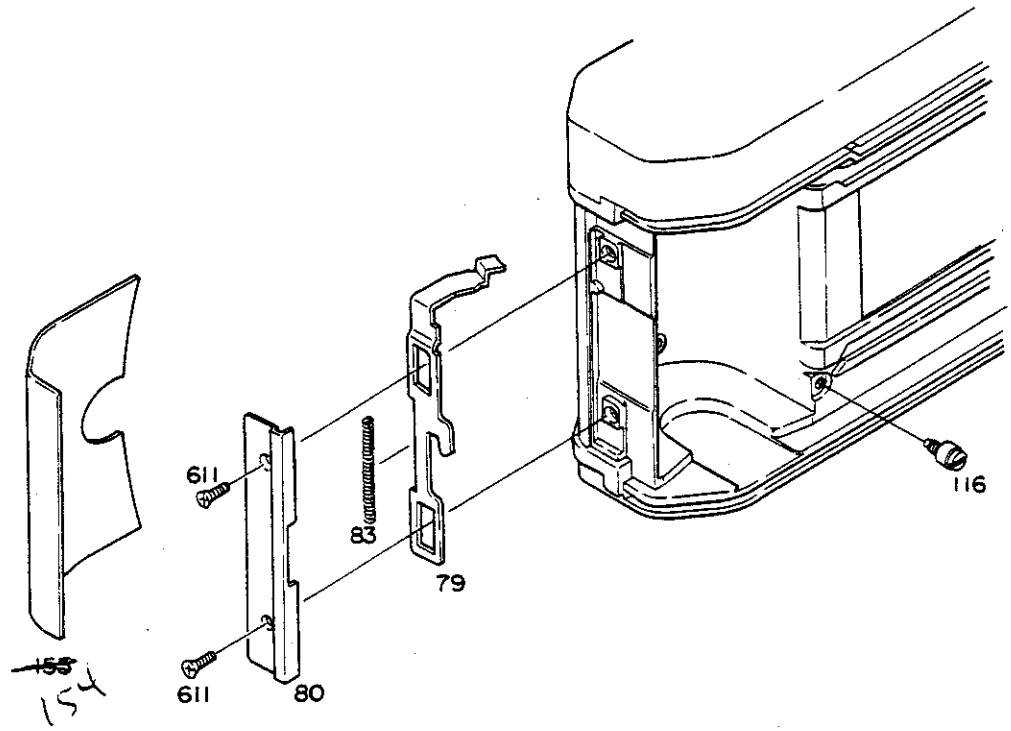

Fig. 14

補助番号 Ckt.No.	部品番号 Part No.	名称 Name	補助番号 Ckt.No.	部品番号 Part No.	名称 Name
77	1K610-168	裏蓋蝶番A Camera back hinge A	B700	1B610-012-2	曲げ板 Plate
79	1K314-050	止め爪B Latch B, camera back			
80	1K610-169	止め爪カバー Latch cover			
83	1K220-038-1	止め爪バネ Spring, latch B #79			
103	1K370-194	DB接点 Data back contact			
104	1K630-081	DB絶縁樹脂 Data back insulator			
105	1K370-358-1	DBアース接点 Data back earth contact			
116	1K146-016	レールビス Screw			
154	1K115-184	ボディ擬革 Leatherette, wind-side			
155	1K115-185-1	ボディ擬革 Leatherette, rewind-side			
156	1K115-186	遮用モルトプレン Light-tight, lower body			
159	1K115-189	上遮用モルトA Light-tight A, upper body			
160	1K115-190	上遮用モルトB Light-tight-B, upper body			
611	A2-17030FB	Screw			
612	1K001-004	Screw			

DISASSEMBLING & ASSEMBLING & ADJUSTMENTS

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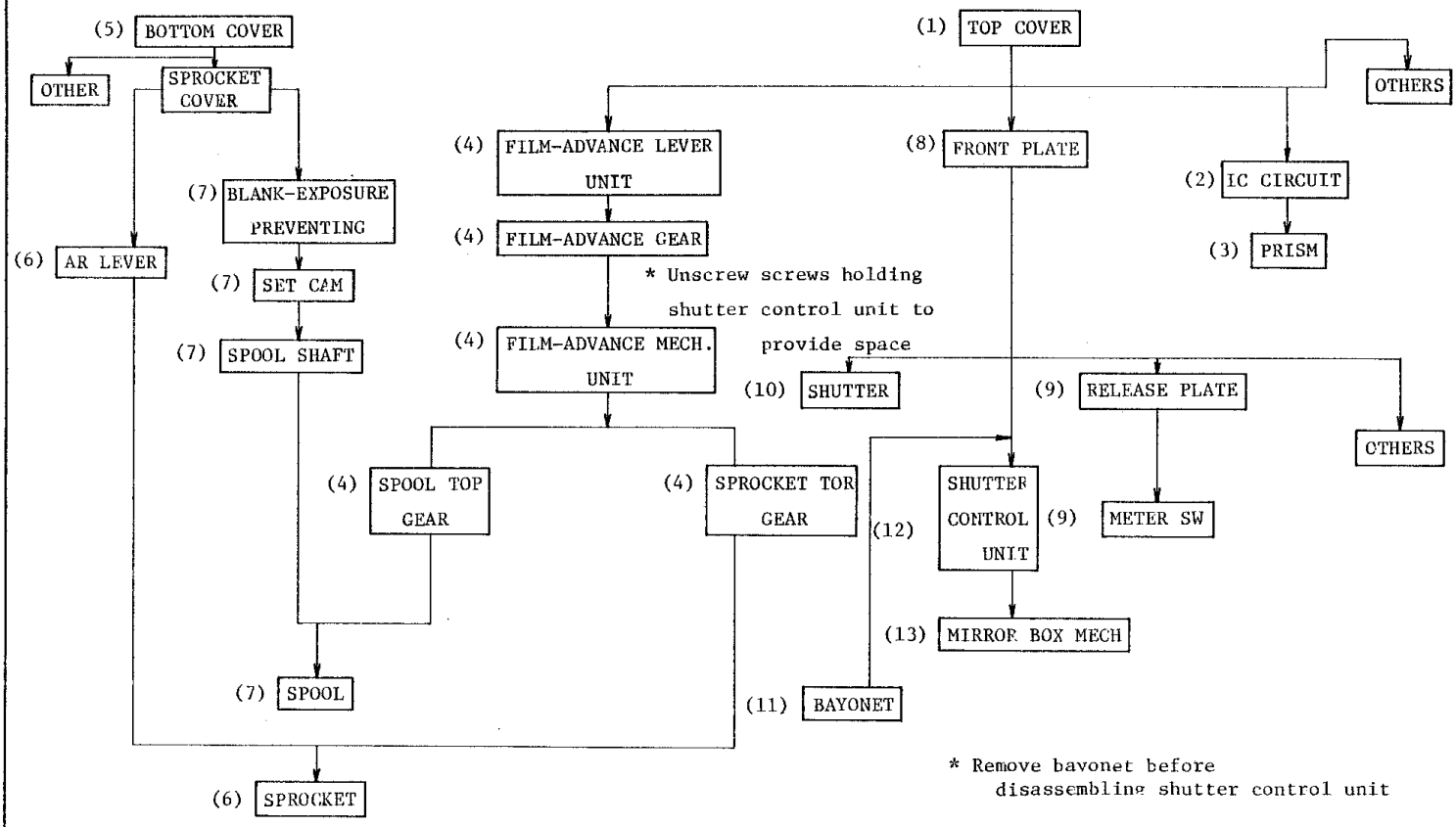
1. DISASSEMBLING OUTLINE



2. DISASSEMBLING DETAILS

(1) TOP COVER

Fig.1 Film-advance lever B407
- Leatherette #402
- Film-advance lever screw #403
- Tool : J11126

Fig.5 Shutter dial #533
- Screw ⊕ #102x3

Fig.6 Rewind knowb #536
- Rewind crank spring #566
- Washer #570
- Rewind shaft #562

Fig.1 Top cover B2026
- Shoulder block #123
- Shoulder block #122
- Screw ⊕ #603x5

(2) IC CIRCUIT Fig.8

Unsolder:
- Lead wire, battery chamber #1051 (red)
- Lead wire, battery chamber #1052 (black)
- Lead wire, data back switch #364 (white)
- Lead wire, data back contact #1057 (white)
- Lead wire, meter switch #1073 (orange)
- Lead wire, meter switch #1060 (red)
- Lead wire, shutter control #1061 (violet)
- " " #1062 (black)
- " " #1063 (brown)
- " " #1064 (yellow)
- Lead wire, MD external contact #1058 (orange)

Unsolder:
- Lead wire, synch terminal #1071 (blue)
- Lead wire, shutter #1070 (green)

SBD circuit board retainer #260
- Screw ⊕ #635x1
- Screw #637x2

IC circuit B1002
- Prism
- Eyepiece mold B328
  - Screw ⊕ #636x2

(3) PRISM Fig.8

IC circuit
- Prism retainer spring #233x2
- Prism retainer #232
- Prism #G3
- Focusing screen frame #253
- Spacer #252
- Prism box #250
  - Screw ⊕ #643x4

Note: Use care to two washers #66 sitting under prism box.

(4) FILM-ADVANCE LEVER UNIT/FILM-ADVANCE MECH. UNIT

Fig.1

TOP COVER

Note: Replace film-advance lever

Unsolder: Fig.2

Lead wire #1056 (violet)
Lead wire #1073 (orange)
Lead wire #1072 (red)

Fig.2

Film-advance lever unit B2408

Screw ⊕ #606x2
Screw ⊕ #602x1

Fig.3

Sprocket stopper spring #2496

Screw ⊖ #500x1

Fig.4

Sprocket stopper cam #429

Tool : J11155
Screw ⊖ #499x1 (left-thread)
Screw ⊖ #631x1

Fig.3

Film-advance shaft screw ⊖ #2651 (left-thread)

Clutch spring #2430
Clutch cam spring #2412
Clutch cam #2414
Film-advance cam #2413
Washer #2663 A-F
Film-advance gear #2415

Fig.3

Film-advance meth. unit B2403

Note: Unscrew Screws #538 and #648 holding shutter control unit and make a space for removing B2403, with shutter control unit floated.

Screw ⊕ #654x3
#121

Fig.4

Spool top gear B2207

Fig.4

Sprocket upper gear #2431

(5) BOTTOM COVER

Fig.12

Battery chamber lid B030

↓

Bottom cover B019

Screw ⊕ #610x3

(6) SPROCKET

Fig.12

AR lever #126

Screw ⊕ #622x1

Washer #662x1

↓

Fig.4

Sprocket screw #2433

Spool top gear

↓

Sprocket shaft bearing #438

Tool : J11118

↓

Sprocket #2470

Sprocket shaft B2201

(7) SPOOL

Fig.12

Double-exposure preventing lever #175

Screw ⊕ #164x1

↓

Fig.4

Motor coupling #138

Screw ⊕ #652x1

↓

Shutter charge lever B104

Set cam collar #171

Screw ⊕ #165x1

↓

Set cam B206

Screw ⊖ #650 (left-thread)

Fig.4

Spool top gear

Note: Lift off #438, with sprocket shaft tilted and retracted.

Fig.4

Spool shaft bearing case B204

Screw ⊕ #605x3

↓

Spool shaft B2203

↓

Spool #2460

(8) FRONT PLATE

Top Cover

↓

Unsolder:

Fig.8

Lead wire, meter switch #1073 (orange)
Lead wire, meter switch #1060 (red)
Lead wire, battery chamber #1051 (red)
Lead wire, battery chamber #1052 (black)
Lead wire, data back contact #1057 (white)
Lead wire, MD external contact #1058 (orange)

↓

Unsolder:

Lead wire, synch terminal #1071 (blue)
Lead wire, shutter #1070 (green)

↓

Self-timer lever B324

Leatherette #111
Screw ⊖ #628x1

↓

Leatherette A #154
Leatherette B #155

Note: Replace B324 after peeling off leatherette from front plate.

Fig.5

↓

Earth spring #539

Screw ⊕ #538x1

↓

Front plate

Screw ⊕ #643x5
Screw ⊕ #642x1

(9) RELEASE PLATE/METER SWITCH

Fig.11

Release plate B2101

Screw ⊖ #66x2
Spring, release plate #65x1
Retainer, Spring #65, #47

↓

Meter switch B102

Unsolder:

Lead wire #1059 (orange)
Lead wire #1060 (red)

Screw ⊕ #72x1
Screw ⊕ #617x1

(10) SHUTTER

Fig.11

Shutter B100

Screw ⊕ #624x2
Screw ⊕ #607x1

(11) BAYONET

Fig.7

- Bayonet #202
  - Screw ⊕ #647x4
- Bayonet spring #208
- Ring #219
- Coupling ring #220
  - Note: Use care to Aperture coupling string #221.
- Front cover B314
  - Screw ⊕ #608x1
  - Screw ⊕ #649x1
- Shutter control unit

(13) MIRROR BOX MECHANISM

- Shutter control unit

Fig.10

- Mirror box mech. B318
  - Screw ⊕ #609x1
  - Screw ⊕ #618x1
  - Screw ⊖ #646x1

Put Mirror down lever B317 to the down position.

Disengage Mirror down lever spring #343 from mirror down lever.

- Mirror holder B308

Fig.9

Washer #375x2

(12) SHUTTER CONTROL UNIT

- Bayonet
- Mirror release lever #554
  - Screw ⊕ #555x1

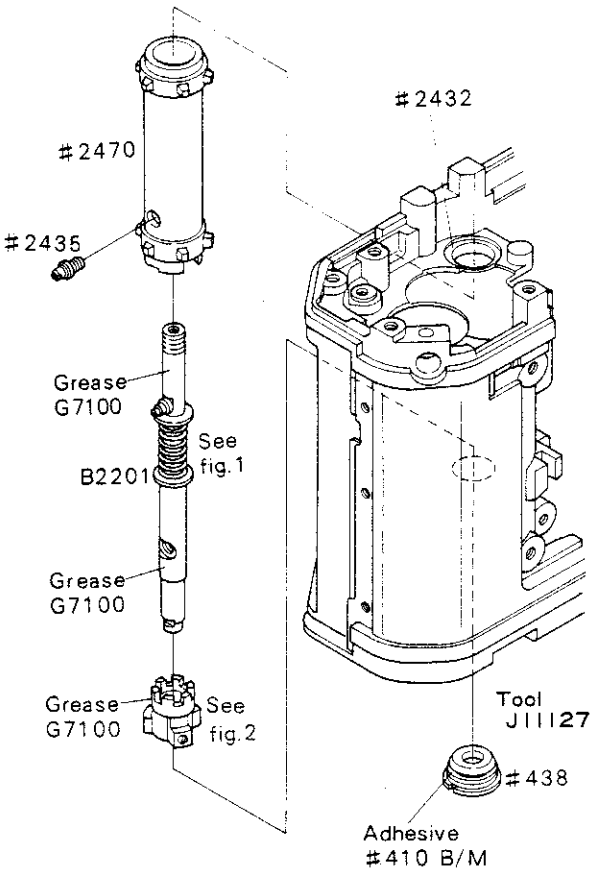
Fig.5

- Roller spring B502
  - Screw ⊕ #648x1
- Shutter control unit B510
  - Screw ⊕ #648x1

Do not damage Shutter speeds inner indicator #540 when removing B510.

- Mirror box mechanism

1. SPROCKET INSTALLATION (HOLD THE CAMERA BODY UPSIDE DOWN)



Body die-casting #2021

↓

Sprocket #2470

↓

Sprocket shaft B2201

Before installation of Sprocket shaft #2434, put Spring #498 to the sprocket shaft as shown in Fig. 1.

Sprocket collar A #2436

Before installation of sprocket collar A #2436, put Sprocket collar A nut #437 to the sprocket collar A as shown in Fig.2.
When installing the sprocket with the sprocket shaft inserted to the camera body, first bring the top of sprocket close to the hole of lower plate and then pull the head of sprocket shaft, extending through the hole so that the tail of sprocket can be dropped into Bearing #2432 of the upper plate.

Sprocket shaft bearing #438

Screw sprocket shaft bearing #438 into Body die-casting #2021.

Sprocket screw #2435

Screw Sprocket screw #2435 into the hole of sprocket to fix the sprocket shaft.

(1) Sprocket shaft B2201

Sprocket shaft #2434

↓

Washer #2655

↓

Spring #495

↓

Washer #2655

↓

Screw #2433

(2) Sprocket Collar A

Sprocket collar A #2436

↓

Sprocket collar A nut #437

↓

Screw #631 x 2

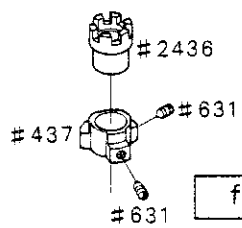


fig. 2

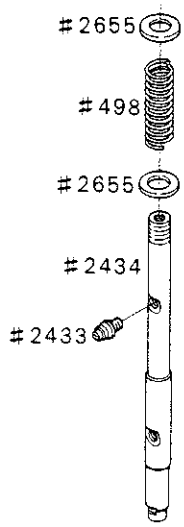


fig. 1

2. SPOOL INSTALLATION

Body die-casting #2021

↓

Spool B2202

↓

Spool shaft B2203

↓

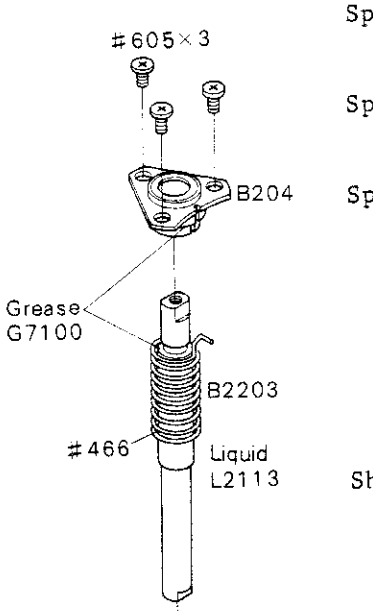
Spool shaft bearing case B204 ⊕ #605x3

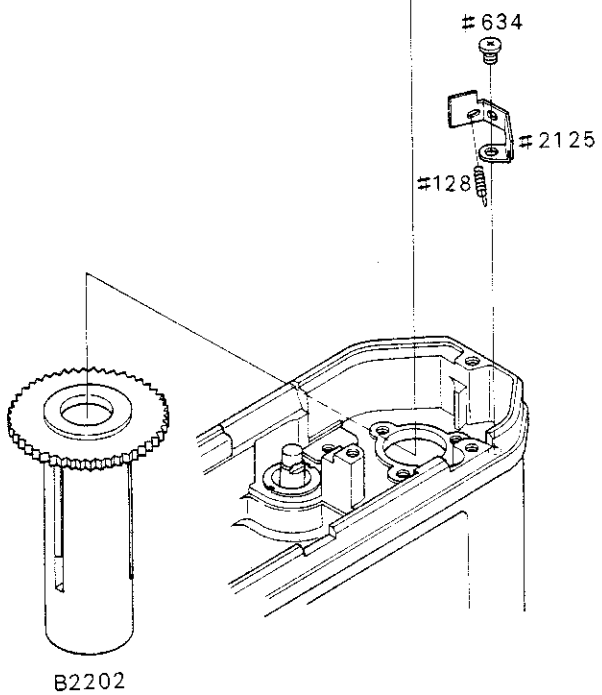
After installing the spool in place, insert the top end of Spool shaft spring #466 into the slit of the spool shaft bearing case as shown in Fig. 3.

↓

Shock absorber #2125 ⊕ #634

Hook the end of Pendulum spring #128 to the shock absorber, with placed toward Shock absorber A #2042.





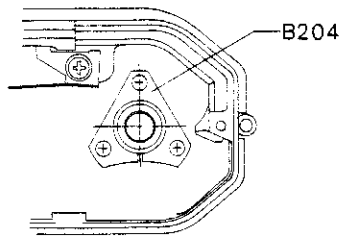


fig. 3 B204 Positioning

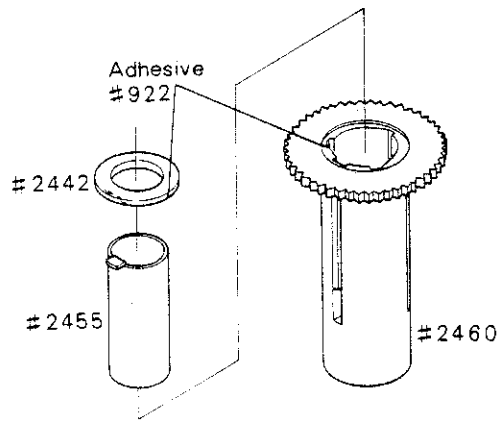
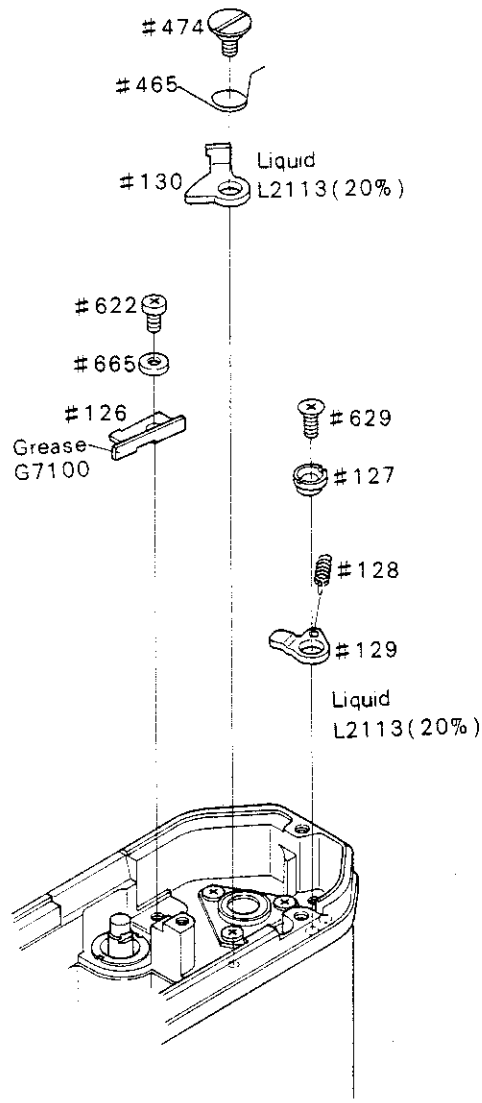


fig. 4 B2202 Exploded

3. LOCK LEVER INSTALIATION



Body die-casting #2021

↓

Lock lever #130

↓

Lock lever spring #465

↓

Lock lever axle #474

After installation of the lock lever, hook Lock lever spring #465 to Lock lever #130.

(1) Pendulum installation

Pendulum #129

↓

Pendulum eccentric axle #127

↓

Screw #629

After installation of the pendulum, hook the other end of Pendulum spring #128 to the pendulum.

Check Pendulum #129 for smooth movement.

Put the pendulum to the drawn back portion with use of the eccentricity.

(2) AR lever installation

AR lever #126

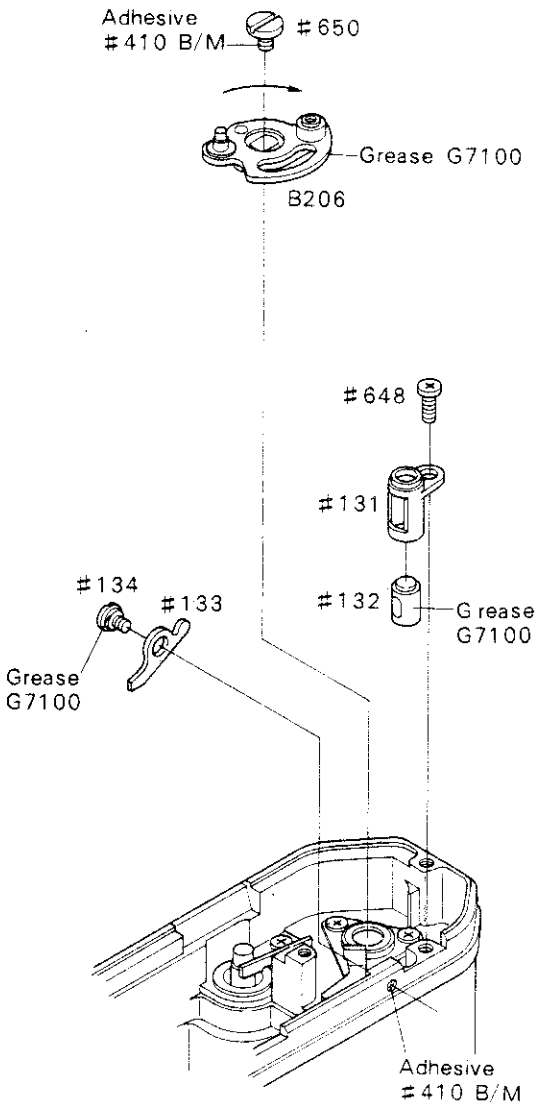
↓

Spacer #665

↓

Screw #622

4. SET CAM INSTALLATION



Body die-casting #2021

↓

Set cam B206

On installation of the set cam, turn Spool shaft B2203 one turn clockwise.

Wash Set cam B206 to remove grease.

↓

Film-advance shaft screw ⊖ #650 (left-thread)

(1) MD shaft bearing installation

MD shaft #132

MD shaft bearing #131 ⊕ #648

Put MD shaft #132 into MD shaft bearing #131.

Bottom cover B019 gives the guidance for installing position of MD shaft bearing #131.

(2) MD see-saw lever installation

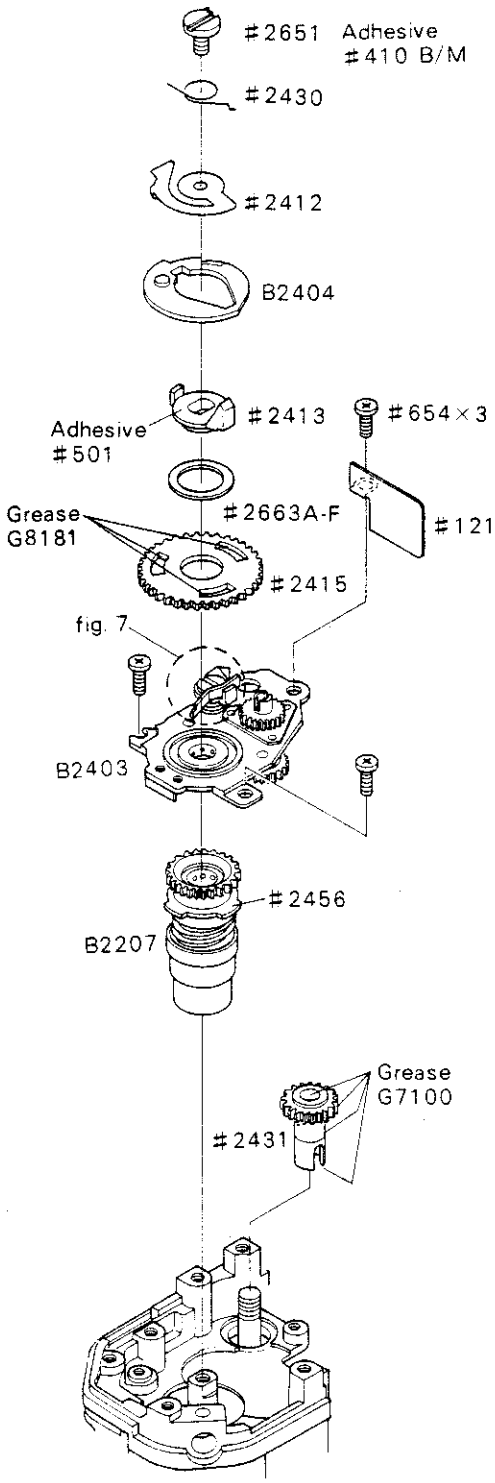
MD see-saw lever #133

Install #133 into the slot of MD shaft #132.

↓

MD see-saw lever axle #134

5. SPOOL TOP GEAR/UNIT, FILM-ADVANCE MECHANISM/FILM-ADVANCE GEAR INSTALLATION



Body die-casting #2021

↓

Spool top gear B2207

Rotating spool, let Friction plate #2456 drop into inside groove of spool.

↓

Sprocket upper gear #2431

↓

Unit, film advance mechanism B2403
Screw ⊕ #654x3 , #121

Rotating spool, install Unit, Film-advance mechanism B2403 in the position of the most smooth rotation.

↓

Film-advance gear #2415, Washer #2663A-F, Film-advance cam #2413

The installing position of Film-advance gear #2415 and Film-advance cam #2413 is referred to Page A12, Fig.5.
Washer #2663A-F (thickness: 0.05,0.1, 0.2,0.25,0.3mm)

↓

Clutch cam B2404

↓

Clutch cam spring #2412

Hook the spring to Clutch cam B2404. Cement the spring to Film-advance cam #2413.

↓

Film-advance shaft screw #2651, Clutch spring #2430

#2651 has a left-thread.
Standard tightening torque of Screw #2651 is 3kg/cm.
After tightening the screw, check the combination movement of Film-advance cam #2413 and Clutch cam spring #2412.
Fig.6 shows the section where Spring #2412 should be hooked to Clutch spring #2430.

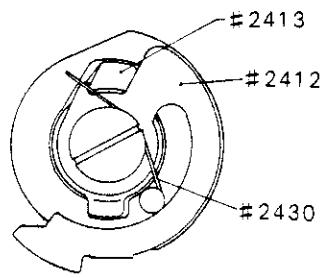


fig. 6-1

Film-advance gear positioning

When one of the fan-shaped openings of Film-advance gear #2415 is aligned with the center of screw hole for #2441, the slots of #2416/#2417 should locate toward the body line at a right angle.

Positioning allowance is within a one full portion of the slot #2416.

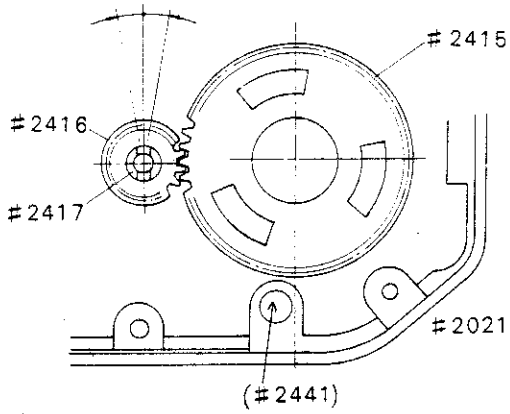


fig. 5

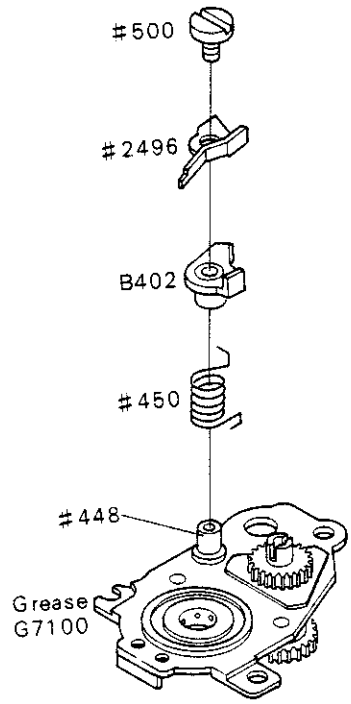
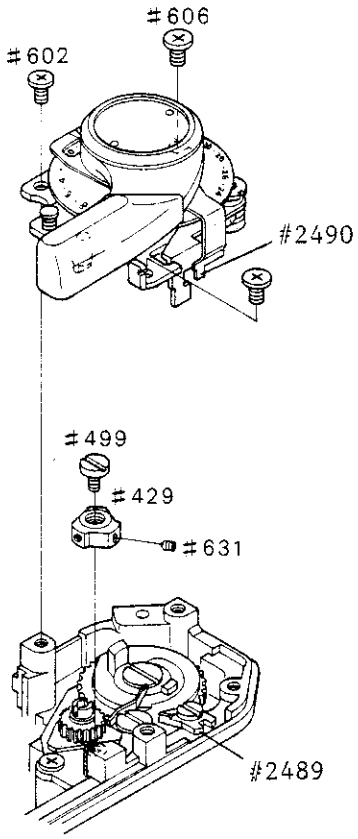


fig. 7 B2403

6. FILM-ADVANCE LEVER UNIT INSTALLATION



Body die-casting #2021

↓

Unit, film-advance lever B2408

When installing Unit, film-advance lever B2408, bring Clutch cam B2404 in engagement with Film-advance gear #2415.

The relative position between Advance claw lever #2194 and Idle gear B#2417 is as shown in Fig.8.

Put Multi-exposure lever #2490 into the fork of Coupling lever #2489.

Screw ⊕ #602

Screw ⊕ #606x2

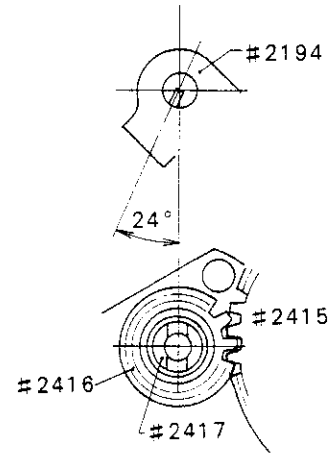


fig. 8

Sprocket stopper cam installation

Sprocket stopper cam #429

Temporarily tighten Screw #631 for adjustment in the next step.

Screw Sprocket stopper cam #429 in place to go as high as Sprocket shaft #2434.

↓

Sprocket screw (left-threaded) ⊕ #499

Sprocket stopper cam positioning should be referred to Fig. 9.

7. SPROCKET STOPPER / SPROCKET POSITIONING

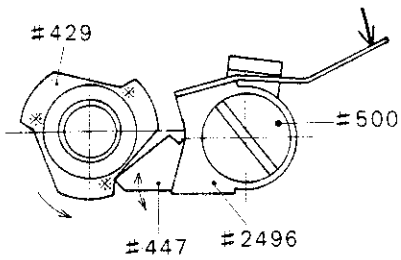


fig. 9

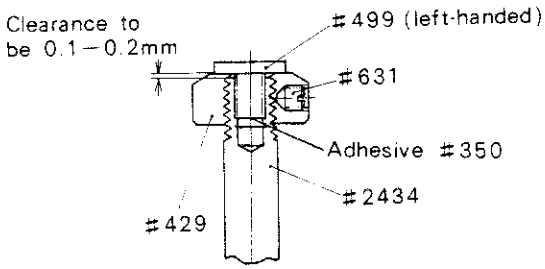


fig. 11

(2) Sprocket Positioning

Sprocket teeth positioning gauge J18064.
Check to see if end of the sprocket teeth comes to the position as depicted in Fig. 10.

Set the film-advance lever to the stand-off position.

Adjust #429 after loosening

Screws #631x2
(Refer to fig. 12-1)

After adjustment, drill a bit hole of ϕ1.1mm to secure one Setscrew #631 firmly.

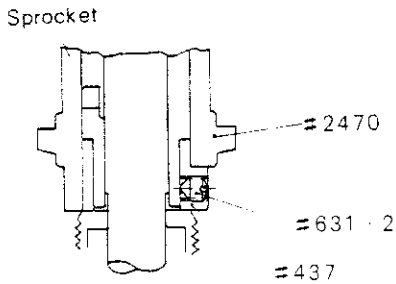


fig. 11-1 Cross section of lower part of sprocket

(1) Sprocket stopper positioning

Sprocket teeth positioning gauge J18064

Set sprocket teeth positioning gauge (J18064) onto body-aperture frame and holding film-advance lever fully stroked, measure the sprocket play on the scale of J18064 as shown in Fig.10.
The play to be within 0.8mm

Repeat the measurement three times in the same manner to make sure the proper operation of #429 at each area shown.

Adjust the play by rotating #429 after removing #499 (left-thread) and loosening #631 as shown in Fig.9, Fig.11.
Be sure to provide 0.1 to 0.2mm clearance between #429 and #2434 on positioning.

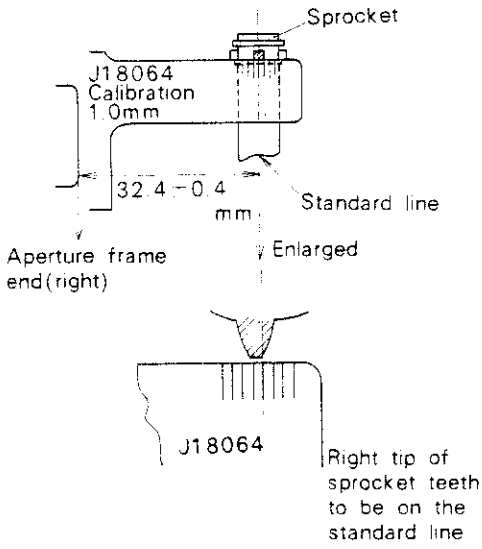
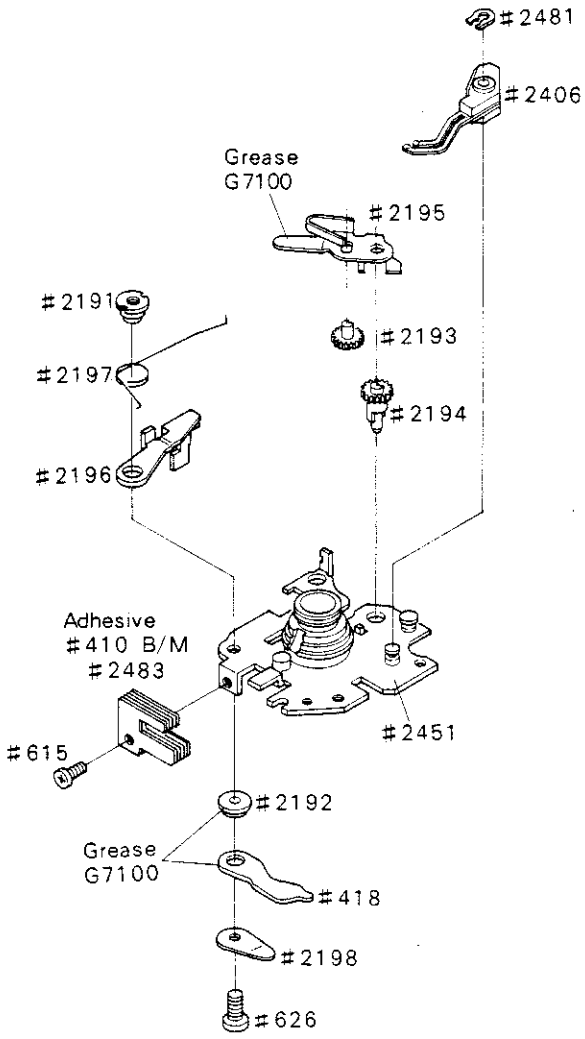


fig. 10 Measurement with J18064

8. FILM-ADVANCE LEVER UNIT / ADVANCE CLAW-COUPLING GEAR INSTALLATION



Base, film-advance lever unit #2451

↓

Advance claw coupling gear #2194

↓

Claw spring #2195

After installing Advance claw gear #2193, fix Claw spring #2195 in place.

The cutout of the gear shaft #2193 should face the spring in the shutter-cocked condition for proper operation of the frame counter.

(Refer to fig.12)

(1) Counter reset lever installation

Click lever collar, unit B2408 #2192

↓

Click lever #418

↓

Click lever stopper #2198

↓

Screw #626

↓

Frame counter reset lever #2196

↓

Counter reset lever axle #2197

↓

Nut, frame counter reverse lever #2191

Hook Claw spring #2195 to Counter reset lever axle #2197.

(2) Click lever spring installation

Click lever spring #2483x5

↓

Screw #615

(3) Switch installation

Switch spring #2476

↓

Lever switch B2406

For proper contact of Switch B2406, use a thinnest metal plate (0.081) to provide a clearance between B2406 and G-ring #2481, when fixing the G-ring.

Do not use the G-ring once removed.

Hook each end of Switch spring #2476 to cutout of the upper bracket and the switch.

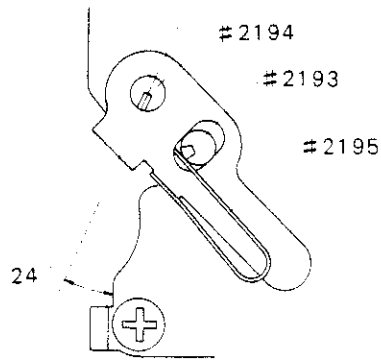
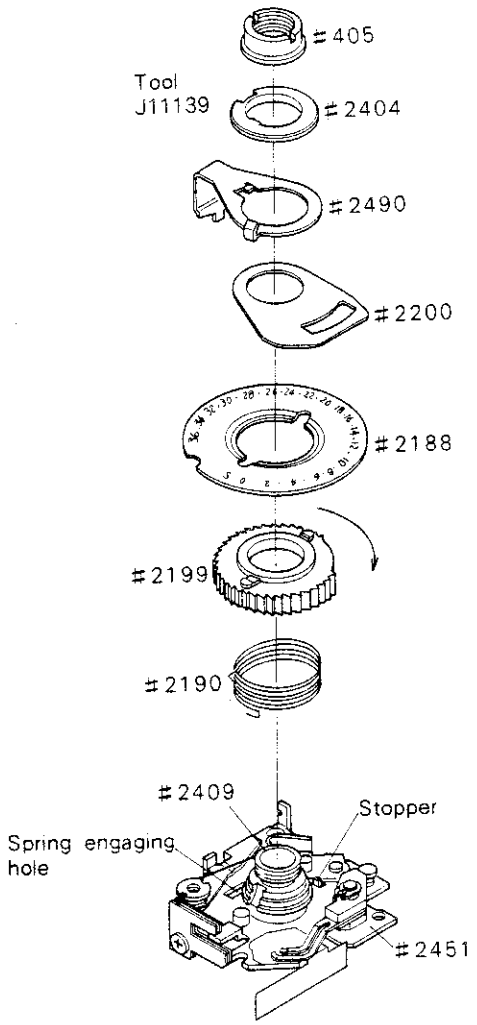


fig. 12

9. FILM-ADVANCE LEVER UNIT BASE / FRAME-COUNTER DIAL INSTALLATION



Base, film-advance lever unit #2451

↓

Counter spring #2190

Hook the one end of the spring to the cutout of Unit #2451.

↓

Ratchet, unit B2408 #2199

First hook the other end of Counter spring #2190 to Ratchet #2199, and then turn the ratchet one turn clockwise. Use the stopper to hold the ratchet in this position.

↓

Frame-counter dial #2188

When installing Frame-counter dial #2188, place the letter 'S' (Start) toward Lever switch B2406.

↓

Frame-counter index #2200
Multi-exposure lever #2490
Frame counter retainer #2404

Put the protrusion of #2404 into the cutout of #2409.

↓

Nut, film-advance lever shaft #405

After aligning the 'S' of the frame-counter dial with the pointer of the frame counter index #2200, tighten Nut #405 strongly.
Check frame-counter dial (#2188, #2199) for smooth operation.

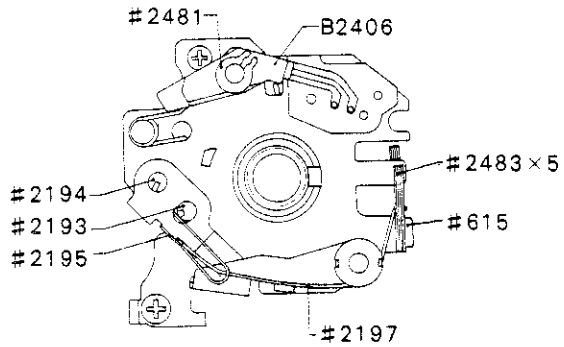
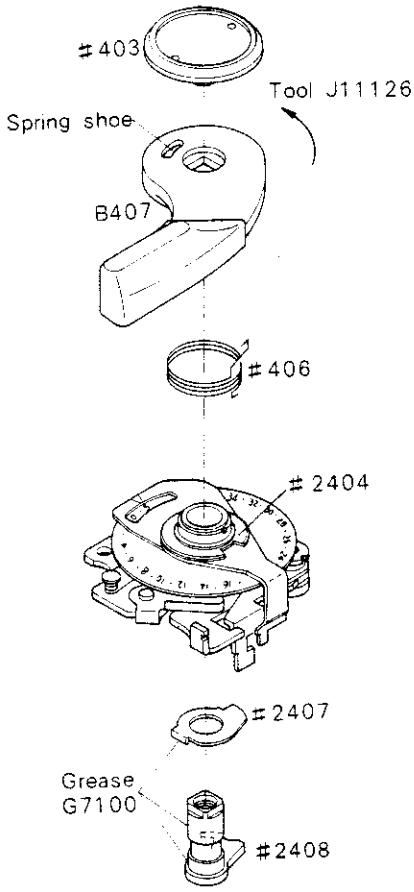


fig. 13

10. FILM-ADVANCE LEVER INSTALLATION (TEMPORARY)



Unit, film-advance lever B2408

↓

Sprocket stopper release plate #2407

↓

Film-advance shaft #2408

↓

Spring, film-advance lever reverse #406

Hook one end of #406 to the cutout of Frame counter retainer #2404.

↓

Film-advance lever B407

Hook the other end of #406 to the cutout of Film-advance lever B407, and then turn it one turn counter **clockwise**.

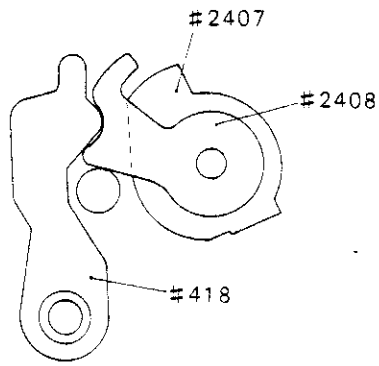
↓

Film-advance lever screw (black) #403

Check the smooth movement of Film-advance lever B407.

Standard torque to pull out the lever: 1 - 2 kg/cm
Standard play in a vertical direction: within 0.13mm

The Fig.14 shows the rest position of film-advance lever.



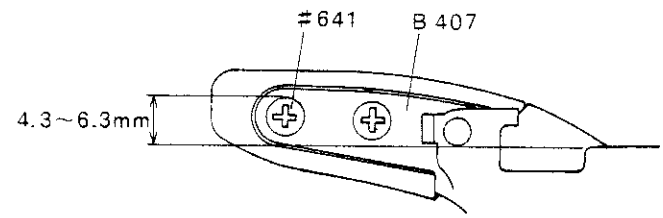
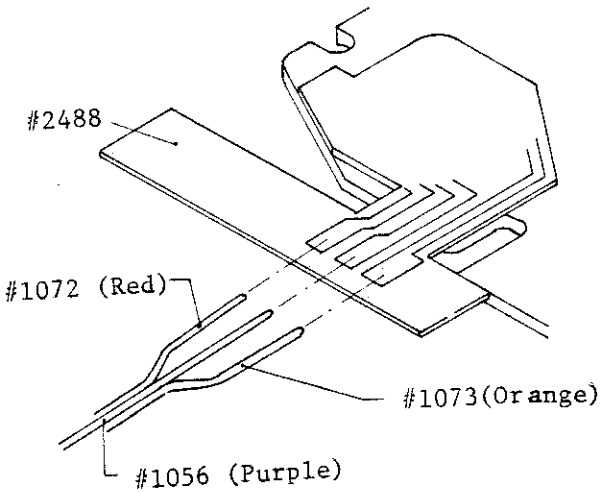


fig. 14 Film-advance lever in the rest position

11. SOLDERING WIRES TC LEVER SWITCH B2406



Circuit board, lever switch #2488

↓

Lead wires #1056, #1072, #1073

Solder the wires as shown in the figure.

Check the solder joints, referring to the table.

The film-advance lever should not catch at the switch blade in the movement.

Film-advance lever	Violet wire/Switch #2451	Red wire/Orange wire
the rest position	On	Off
the stand-off position	Off	On

12. RATCHET CAM, PENDULUM ADJUSTMENT

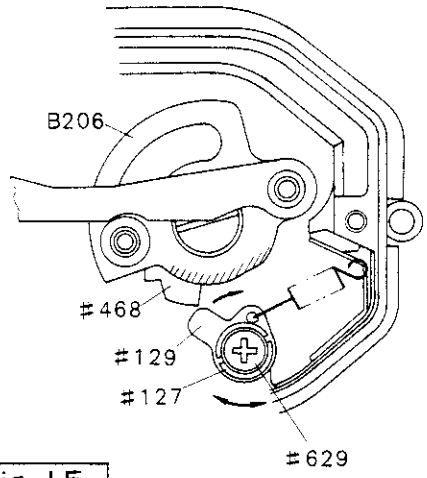


fig. 15

Relative movement of Film-advance stopper with Pendulum

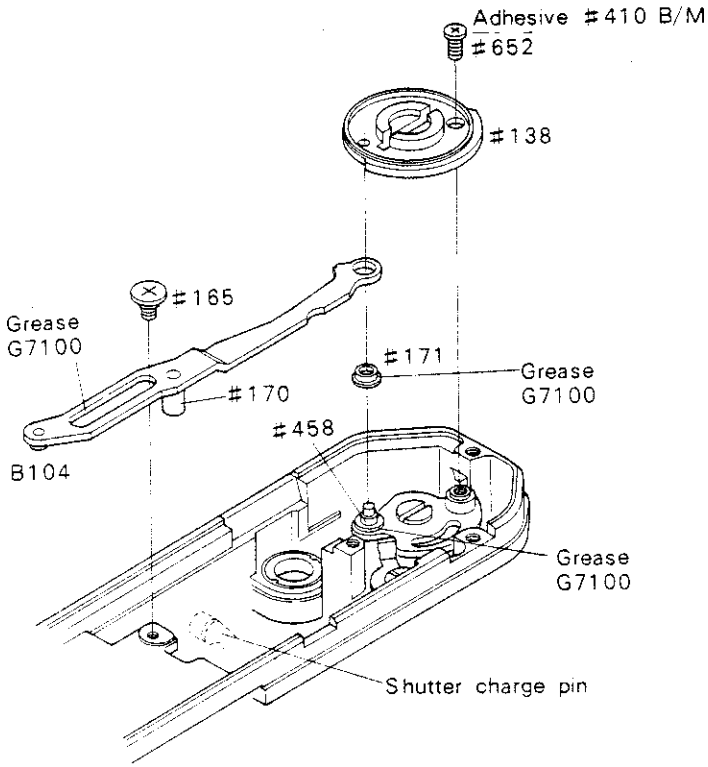
From when pendulum #129 disengages from Ratchet cam #468 until the film-advance lever is fully stroked, movement of ratchet cam should be within 0.3mm.

Loosen Screw #629 and adjust Ratchet cam #468 by rotating Pendulum eccentric axle. Be sure to re-tighten Screw #629.

Make sure proper shutter charge or film-advance operation when film-advance lever is stroked slowly or quickly, and weakly or strongly.

Return set cam slowly to check if it moves 0.3 - 0.7mm after being disengaged from Pendulum #127.

13. SHUTTER CHARGE LEVER, MOTOR COUPLING INSTALLATION



Set cam collar #171

↓

Shutter charge lever B104
Screw ⊕ #165

Fitting B104 onto #171, position Charge lever pin #170 at right side of shutter charge pin.

↓

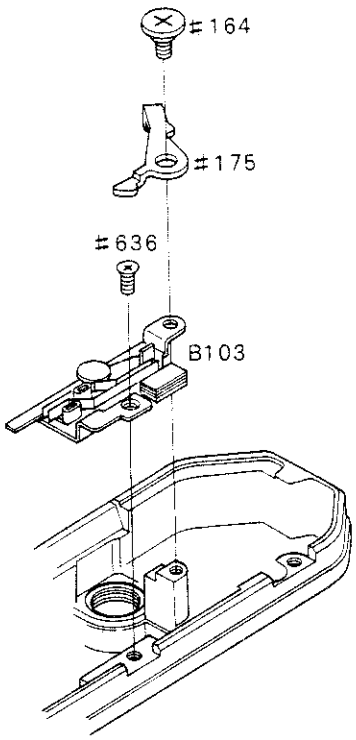
Motor coupling #138

↓

Coupling screw #820

Check that shutter cocks certainly when film-advance lever is slowly stroked, and that set cam returns to its original position.

14. MD SWITCH CIRCUIT BOARD, DOUBLE-EXPOSURE PREVENTING INSTALLATION



Body die-casting #2021

↓

MD switch circuit board B103 Screw ⊕ #636

↓

Lever, double-exposure preventing

Hook top end of the lever to Spring, double-exposure preventing lever #176.

Refer to Fig.16.

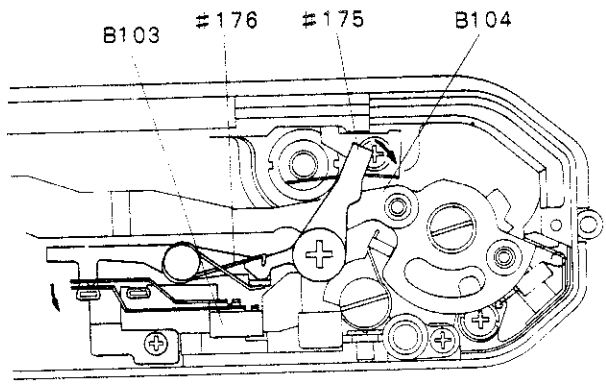


fig. 16 After the shutter is released

When stroking the film-advance lever, MD switch and Lever, double-exposure preventing move to the allow direction.

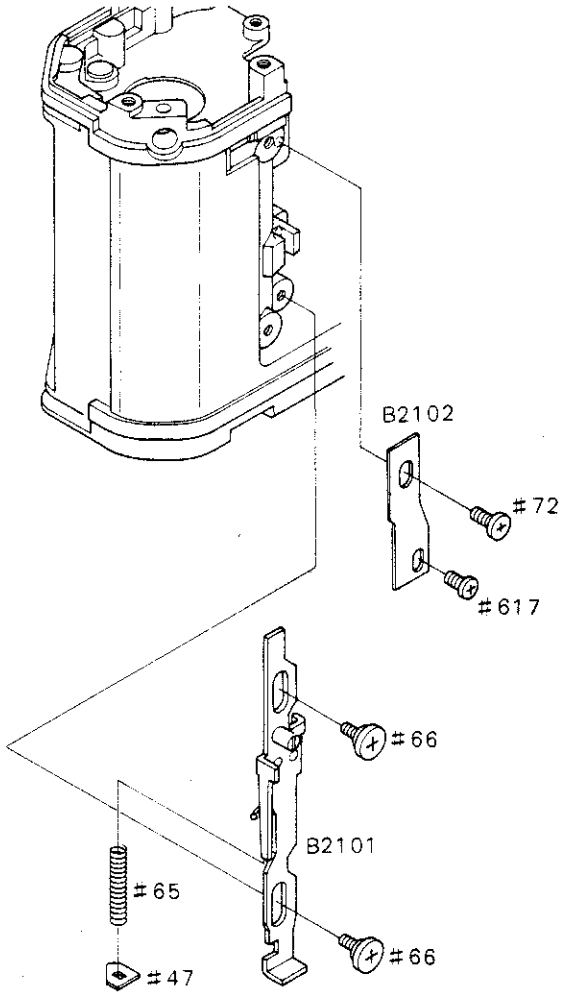
(1) Check of MD Switch

MD switch should switch off when film-advancing is completed. Clearance of the contact blades should be more than 1.5mm.

(2) Double-exposure preventing lever movement check

When the film-advance lever is returning from the full stroke, see if double-exposure preventing lever couples to shutter charge lever before releasing the pendulum.

15. RELEASE PLATE AND METER SWITCH, CIRCUIT BOARD INSTALLATION



Body die-casting #2021

↓

Circuit board, meter switch B2102
Screw ⊕ #72 ⊕ #617

Installing position of the meter switch, circuit board is adjusted by loosening Screw #617. This work can be done either after fixing the release plate or after replacing front plate which has the necessary access opening.

↓

Release plate B2101
Screw ⊖ #66x2

Use tweezers to hold Spring #65 and Retainer, spring #65 #47 in place before installing the release plate onto the body.

Make sure that the meter switch blades should not bend.

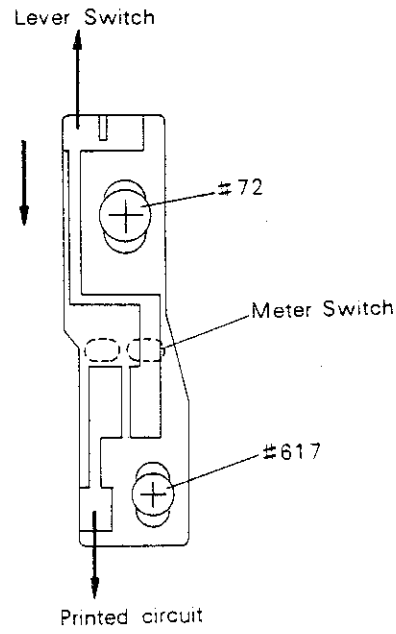


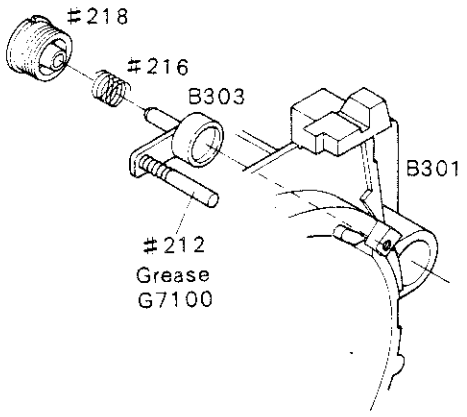
fig. 17

Meter switch circuit board installation

Install circuit board, with meter switch off. See Fig.17. Meter switch is located preferably closer to contact on circuit board.

Accurate positioning should be made by release button stroke adjustment after replacing top cover.

16. FRONT PLATE UNIT (LENS RELEASE BUTTON AND MANUAL STOP-DOWN LEVER)



Front plate unit B301

↓

Lens release button B303

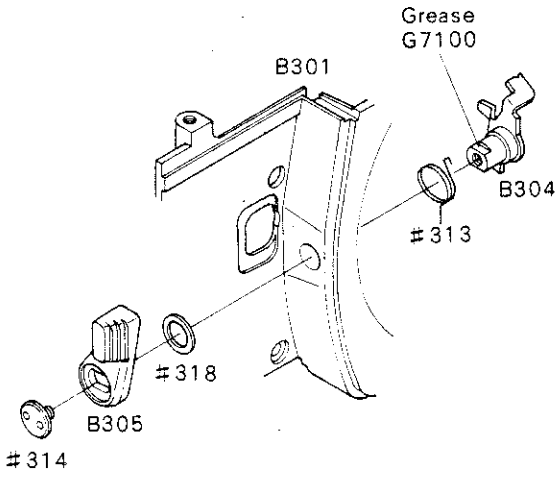
↓

Lens release button spring #216

↓

Lens release button sleeve #218

Check lens release lever for smooth operation.



Tool J11135

Front plate unit B301

↓

Stop-down lever Spring #313

Manual stop-down lever B304

Fig.18 shows how to hook #313 in place.

↓

Manual stop-down lever washer #318

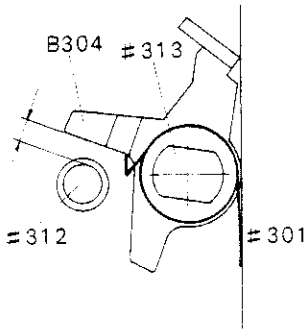
Stop-down lever B305

Put B305 onto B304.

↓

Stop-down lever screw #314

Make sure of smooth movement and spring-loaded return of Stop-down lever B305.



Check stop down lever for vertical play: less than 0.2mm

There should be a clearance between Manual stop down lever B304 and aperture lever collar #324, when B304 is free.

fig. 18 #313 Spring shoe

17. FRONT PLATE UNIT (FOCUSING SCREEN FRAME AND MIRROR)

Front plate unit B301

↓

Mirror axle base unit B307
Screw ⊕ #616x2

↓

Washer #375x2

Hold Front plate unit, with rewind-side down, to sit washers in place.

↓

Focusing screen frame B306

↓

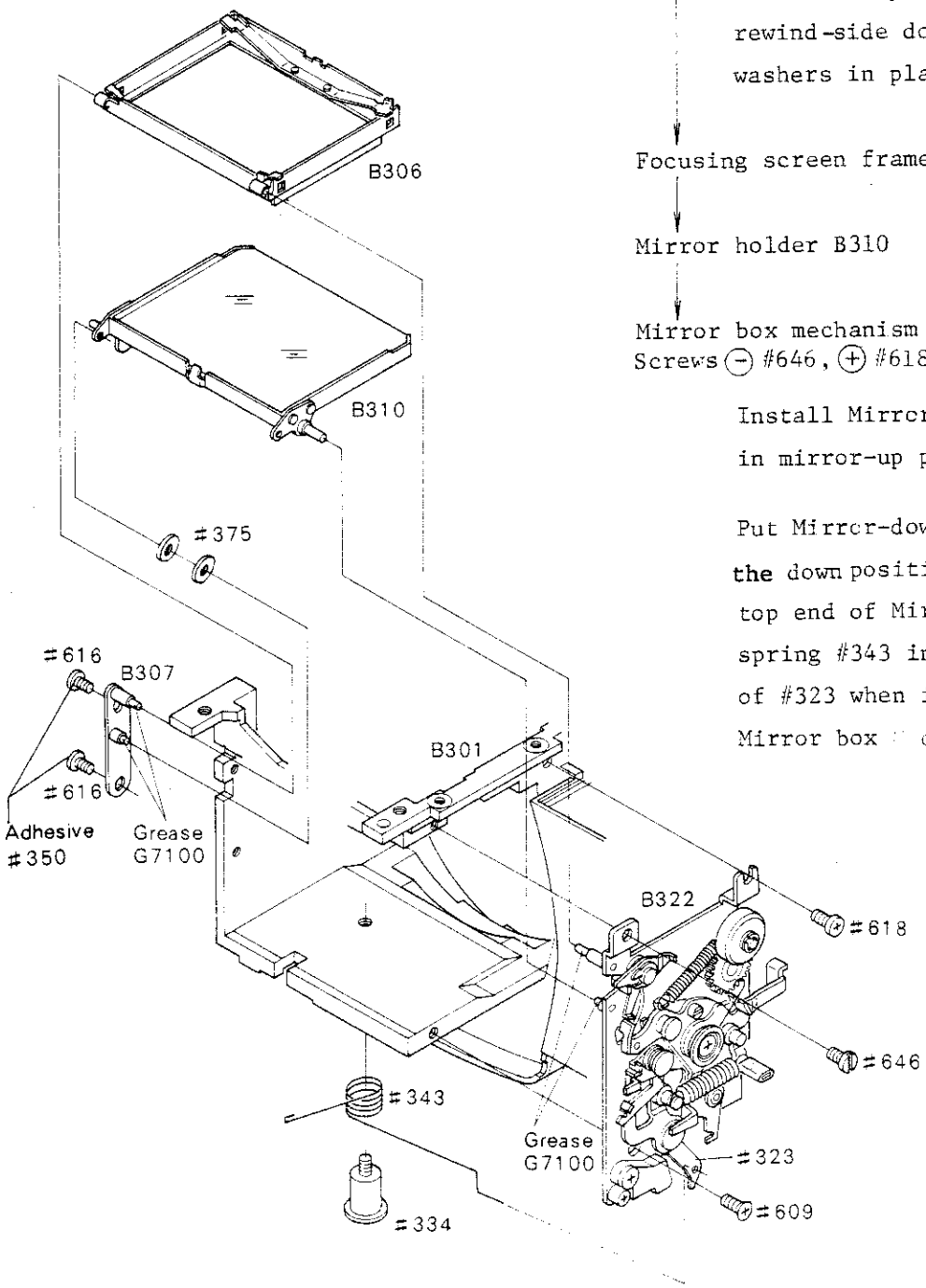
Mirror holder B310

↓

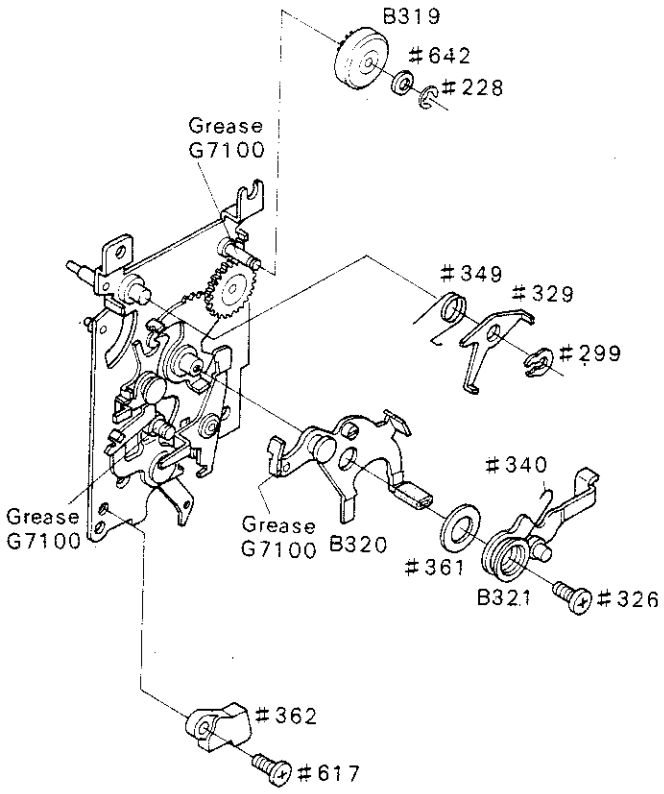
Mirror box mechanism B322
Screws ⊖ #646, ⊕ #618, ⊕ #609

Install Mirror holder B310 as in mirror-up position.

Put Mirror-down lever #323 in the down position and insert top end of Mirror-down lever spring #343 into the hole of #323 when installing Mirror box mechanism B322.



18. MIRROR BOX MECHANISM INSTALLATION B322



Mirror box mechanism B322

↓

Mirror-up stop lever #329

Spring, mirror-up stop lever #349

G-snap ring #299

Place the cutout of ring toward inside.

↓

Fly wheel B319

Washer #642

E-snap ring #228

↓

Mirror-up lever B320

Washer #361

↓

Aperture lever B321

Screw ⊕ #326

↓

Shock absorber, mirror-down lever #362

Screw ⊕ #617

19. SPRING HOOKING POSITION AND ENGAGED CONDITION OF LEVERS

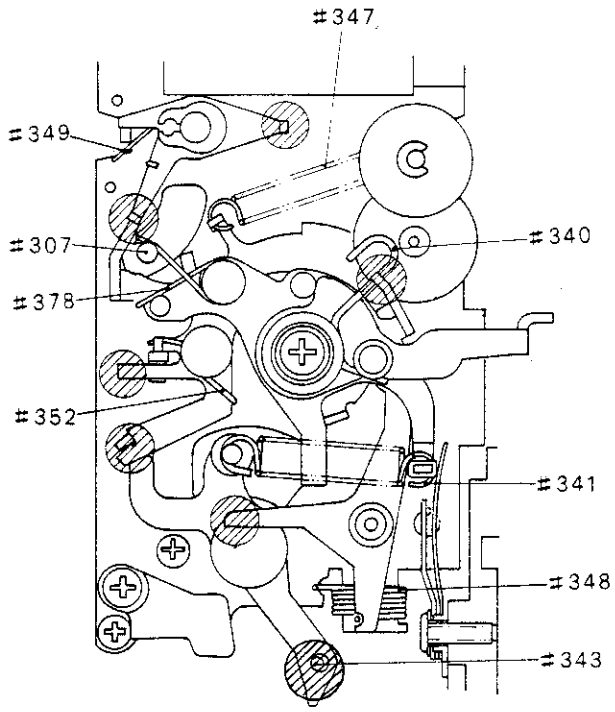


fig. 19

Mirror-up lever, Spring #378 should be engaged with Mirror holder pin #307.

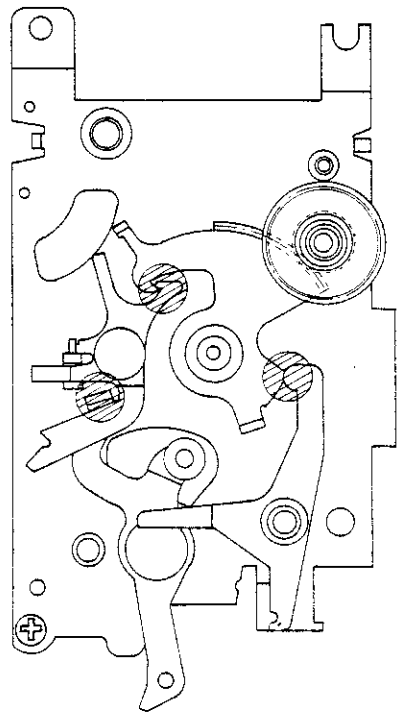


fig. 20

Apply G7100 to parts hatched in Fig.19 and Fig.20.

20. APERTURE LEVER HEIGHT POSITIONING

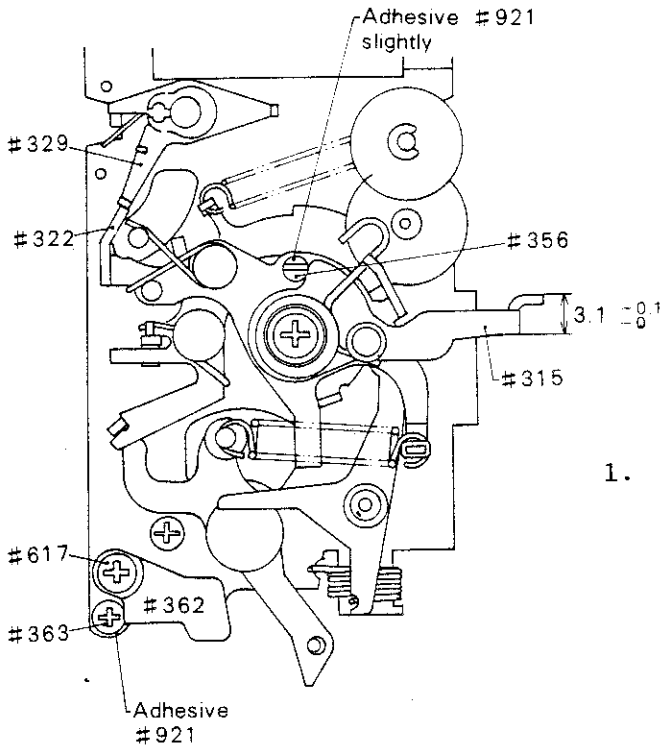
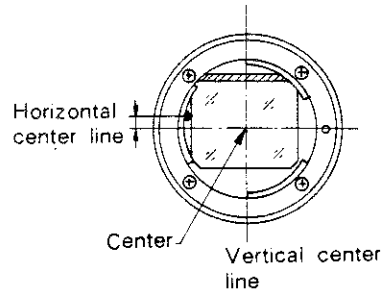


fig. 22

(1) Measurement

Use Tool J18004 to measure aperture lever height from the horizontal center line of camera bayonet mount.



1. Aperture lever height of mirror charged condition

   Specification: $3.1^{+0.1}_{-0}$ mm

   Adjustments can be made by turning 3.1 eccentric axle #356. After this, apply a little Lock-tight #921 to axle #356. Be careful not to exude #92 onto Aperture lever #315.

2. Aperture lever height of mirror released condition

   Specification: $3.1^{+0.4}_{-0.15}$ mm

   Adjustments can be made by turning Eccentric axle, mirror box mechanism #363, after loosening Screw #617. Apply a little Lock-tight #921 to axle #363.

3. Aperture lever height defference between mirror charged and released conditions.

   Specification: more than 0.15mm

4. The clearance between Mirror-up lever #322 and Mirror-up stop lever #329 should be more than 0.15mm. (Refer to next page)

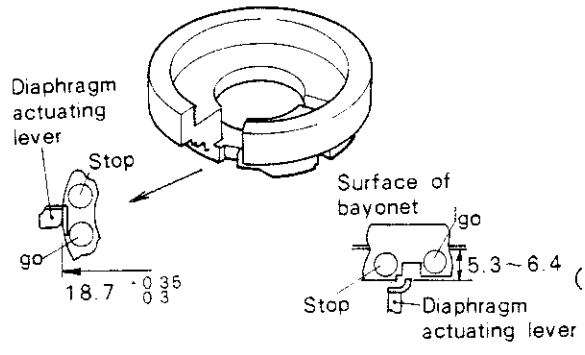


fig. 23

(2) Position of Aperture lever

Check the distance from vertical center line and the depth from bayonet surface. See Fig.23

The tip of Aperture lever should not contact the "stop" side of Aperture lever depth gauge J18042, and should not contact with "go" side. Adjust the lever position by bending Aperture lever.

21. MIRROR BOX MECHANISM SPECIFICATIONS

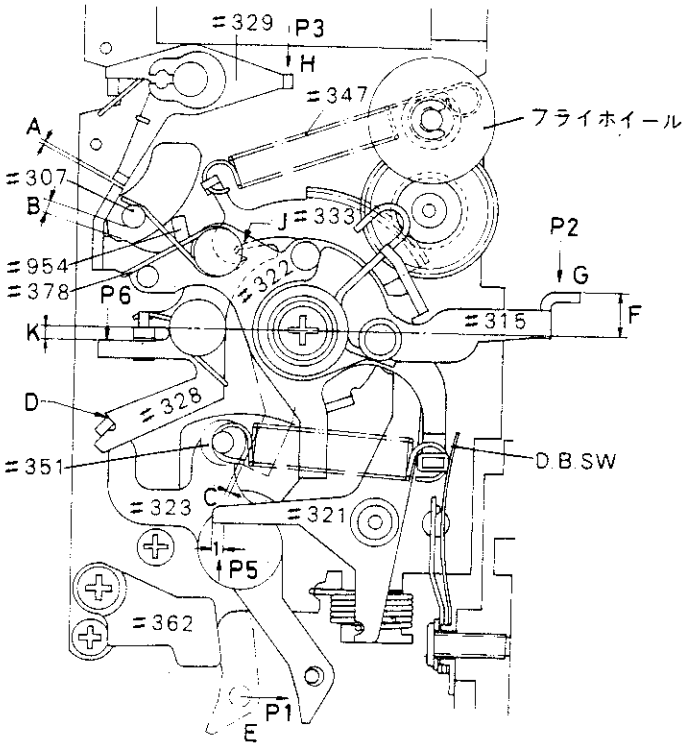


fig. 24

(1) Mirror-up lever #322

Clearance (A): More than 0.15mm
(in mirror-down position)

Clearance (B): More than 0.8mm
(after film-advancing)

Clearance (C): More than 0.1mm
(in mirror-up position)

(2) Mirror-down lever #323

Engaging length (D): 0.9mm

Reverse torque (E): P1=490g

(3) Aperture lever #315

Height of aperture lever (F)

Charged-position: $3.1^{+0.1}_{-0}$ mm

Released-position: Less than 3.5mm

Balance between the both positions: More than 0.15mm

Reverse torque (G): 90-120g

Stroke: More than 7.1mm

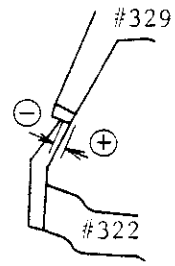
Stop-down measurement: More than 7.4mm

(4) Mirror-up stop lever #329

Engaged position with Mirror-up lever #322: #329 should meet the whole working face of #322.

Allowance: +0.2 - 0.1mm

Disengage torque (H): More than 25g (before charging)
35g ±8g (after charging)



(5) Functional gear #333

Clearance (J): More than 0.05mm (after charging)

(6) Shutter release lever #321

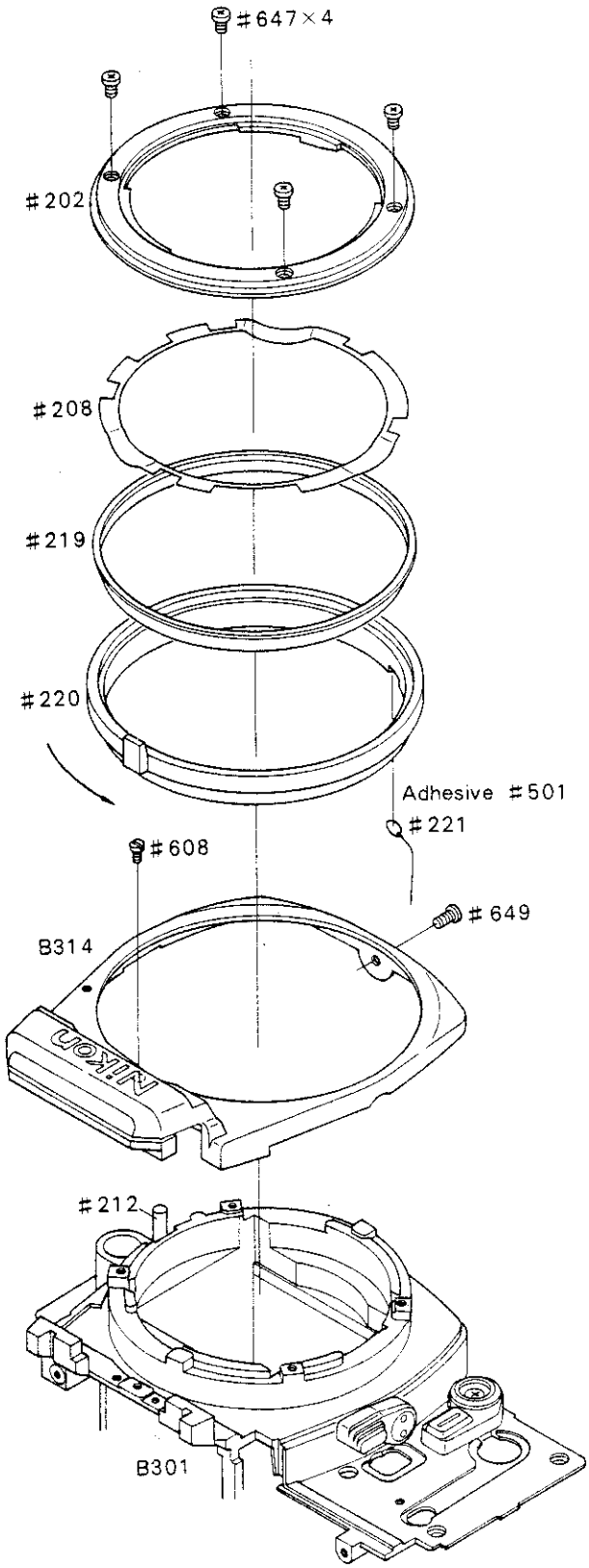
Torque: More than 85g (at the point of 1mm from the lever end)

(7) Signal lever #328

Distance (K): 1±0.15mm (after charging)

Release torque (P6): Less than 100g
(at the point of 1mm from the lever end)

22. FRONT PLATE UNIT (FRONT COVER, COUPLING RING, BAYONET)



Front plate unit B301

↓

Front cover B314

⊕ #608
⊕ #649

Coupling #220

Hook Meter coupling, string #221 to projection of #220 as shown in fig.26.
After installation, cement top of #221.

Ring #219

↓

Bayonet spring #208

Align the cutouts with the front plate.

Bayonet #202

⊕ #647x4

Fix Bayonet #202 after making suer that Lens release pin #212 is positioned in place.

Do not catch Bayonet speing #208 under Bayonet #202.

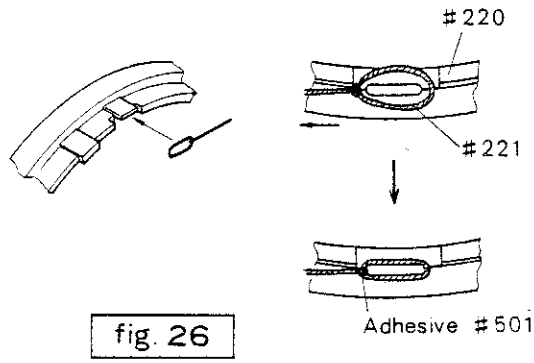
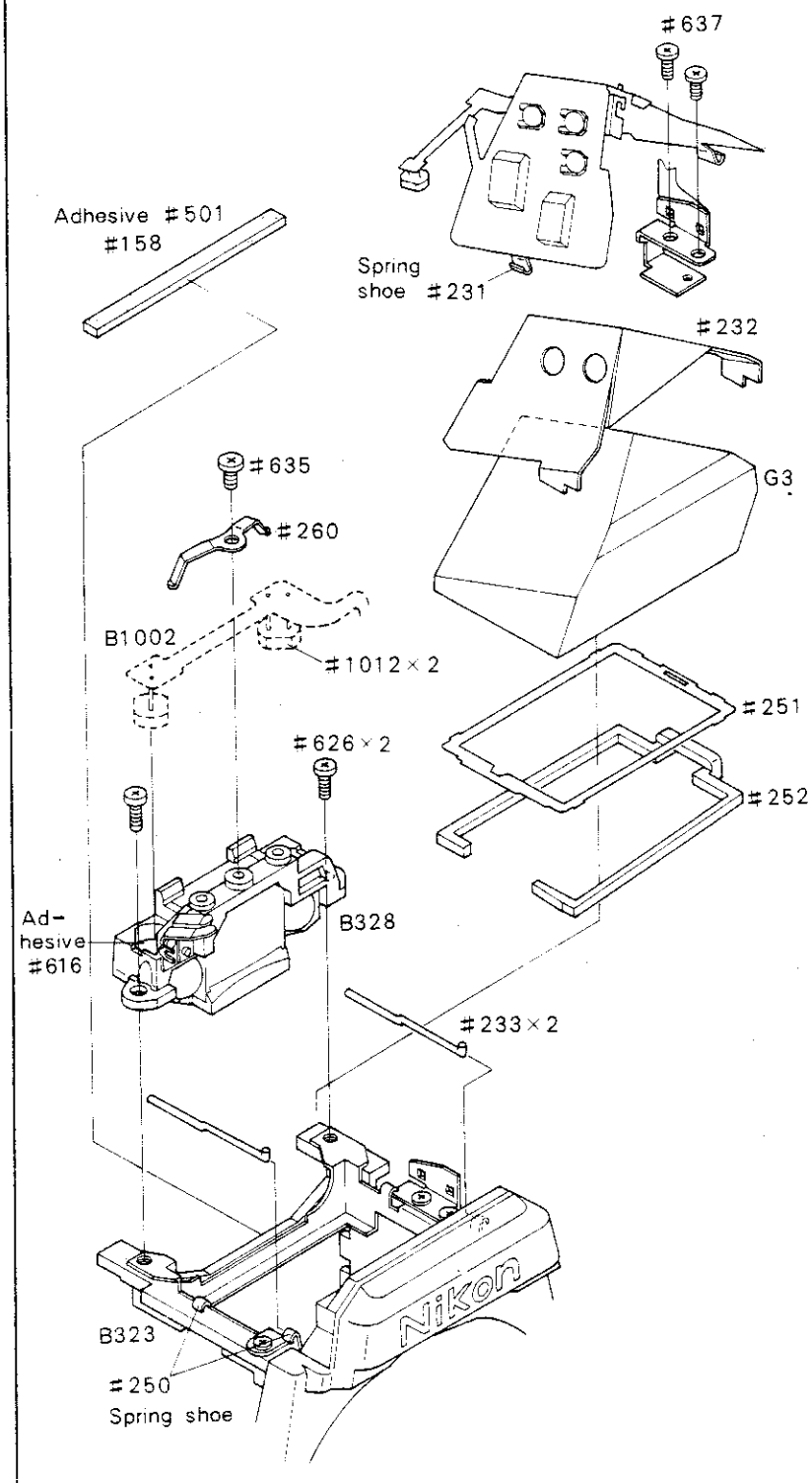


fig. 26

23. PENTAGONAL PRISM, EYEPIECE AND IC PRINTED CIRCUIT INSTALLATION



Prism box #250
↓
Finder field frame #251
Spacer #252
↓
Pentagonal prism G3
↓
Clean before installing
↓
Prism retrainer #232
IC printed circuit B1002
↓
Spring #233x2
↓
Hook the springs in the following order;
↓
Hook #250 (eyepiece-side)
↓
Prism-retaining plate #231
↓
Hook #250 (bayonet-side)
↓
Be careful not to scratch the prism.

Prism box B323 (front plate unit)
↓
Light-tight (#158)
↓
Eyepiece mold, B328
Screw ⊕ #626x2
↓
Clean the prism-side surface of eyepiece lens
↓
Photo diode #1012x2
↓
SBD printed board retainer #260
Screw ⊕ #635
↓
Apply adhesive into the cutout of B328 to cement #1012.
↓
Screw ⊕ #627x2

24. MIRROR 45° ANGLE, INFINITY FOCUS AND PICTURE ANGLE ADJUSTMENT

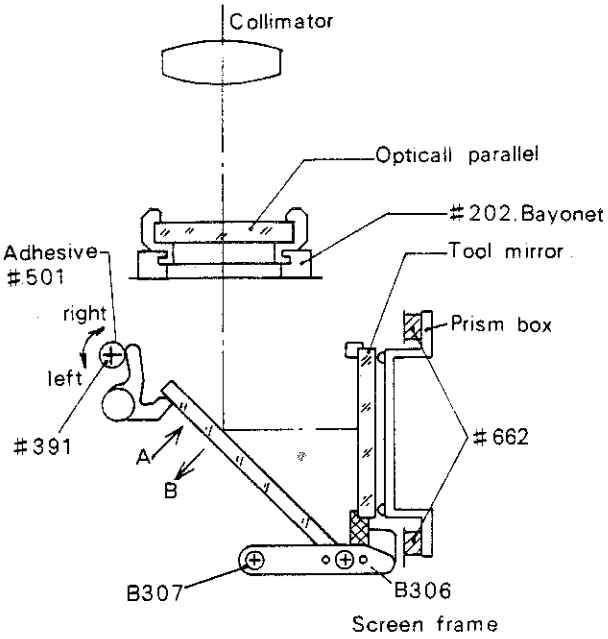


fig. 27

(1) Mirror 45° angle adjustment

Tools: Optical parallel J18037
Mirror tool J18070
Collimator(f=500mm) J19002

Set J18037 on bayonet mount, install J18070 in screen frame (#245) and look through collimator J19002 to see if the images both on J18037 and on J18070 align. If not aligned, adjust as explained in table below. After adjustment, apply adhesive #501 on #391.

Note: 1) Place the camera back on the work surface with body top toward the collimator's post. If camera positioning is wrong images in the collimator will be varied.
2) Image view should not vary in several shutter releasing, nor before and after shutter cocking.

(2) Mirror 45° Adjusting Table:

	Upper	Lower	Left	Right
Image A —— Image B ▬▬	down	up	right	left
How to align Image B on Image A	Rotate #391 clockwise, and mirror moves in B direction.	Rotate #391 counterclock-wise, and mirror moves in A direc-tion.	Add #662 washer to #662 at two posi-tions on FRE side, but one only at each place.	Move B307 in the direction of arrow.

Image A ——— : Image on J18037 Image B ▬▬ : Image on J18070

(3) Infinity (∞) focus adjustment

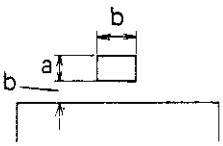
Tools: Lens tool 50mm F2(J18010), Collimator f=600mm(J19001)
Standard: Within 30"

Coarse-adjust the focus by evenly raising or lowering the washers (#662A - U) located at four places under Mirror box. Then, fine-adjust the focus with Mirror 45°adjusting pin (eccentric) #391. After adjustment, be sure to secure #391 with adhesive #501.

(4) Picture angle adjustment

Tools: Appropriate standard lens 50mm F1.4 as a tool. Test chart (J18006). Stage, Focusing screen tool (J18033)
Standard: Parallax... Within 0.5mm in the aperture plane, vertically and horizontally
Finder view ... Inclination of Finder image against aperture plane to be within 1°30'

25. ADR WINDOW POSITIONING



Specified position of F-figure window $\frac{1}{2}b \sim 1b$

No remarkable tilting of window relative to viewfield frame is permitted.

Position of window relative to viewfield frame

5.6 Tilted

Shift F-mask plate #237, or tilt F-mirror holder N1.

5.6 Too low

5.6 Too high

Tighten or loosen F-mirror adjusting screws ⊕ #875x2

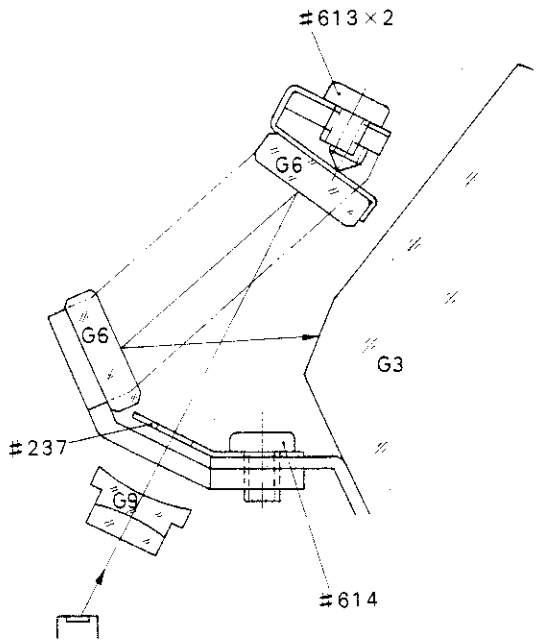
Position of F-figure relative to window

5.6 Right-sided

5.6 Left-sided

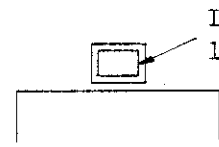
5.6 Too low

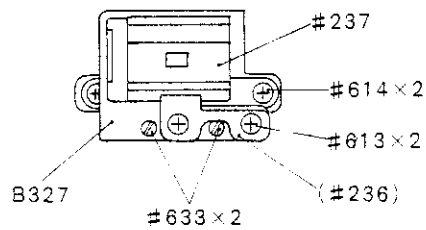
Shift F-mask plate #237



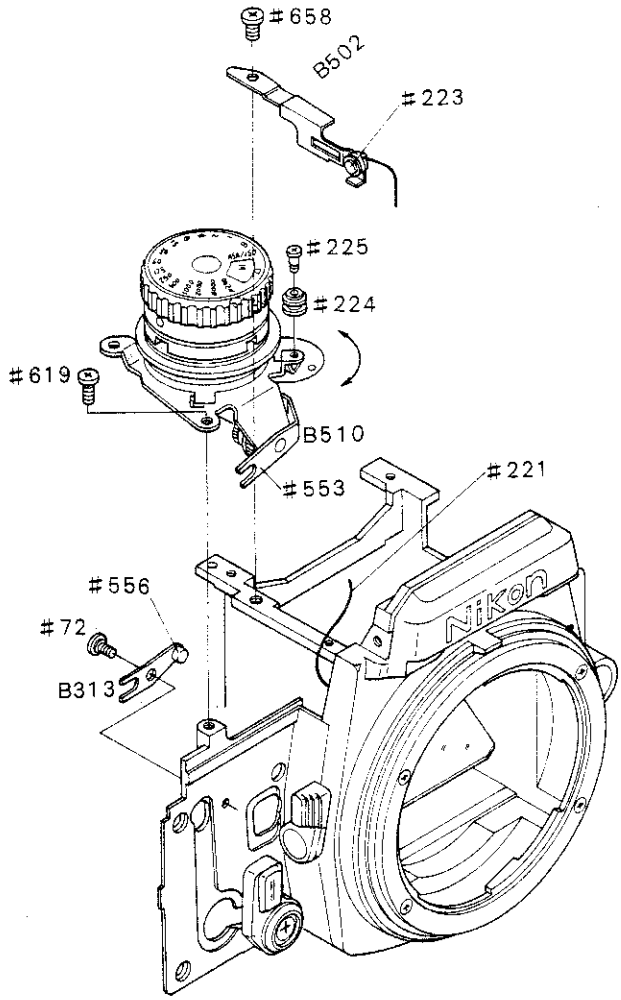
Ordinary AI lens, F-figure check gauge J18065, AI F-figure window check gauge J18063

When checking for correct position of the window, attach gauge J18063 onto camera bayonet. See that image of window frame line on the gauge appears in the F-figure window.





26. SHUTTER CONTROL UNIT INSTALLATION



Front plate unit B323

↓

Shutter control unit B510

Screw ⊕ #619

Place the tip of See-saw lever #553 on Mirror-up stop lever #329.

Be careful not to scratch the shutter speeds inner indicator.

↓

Roller spring B502

Screw ⊕ #658

Route String #221 on Roller #223 installed atop Roller spring B502.

↓

Roller, aperture coupling string #224

Screw ⊕ #225

Make sure smooth rotation of the roller.

↓

Release adjusting lever B313

Screw ⊕ #72

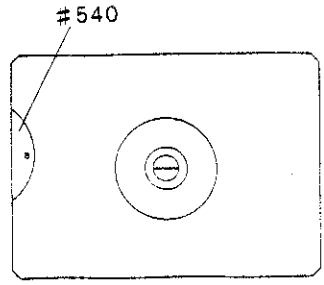
Release lever pin #556 installed atop the release adjusting lever should be coupled to the fork of See-saw lever #553.

Shutter speed inner indicator #540

Turn shutter dial from B to X 200 and reverse.

Specification: Shutter speed figures be entirely visible.
Inclination of figures be within 5°.

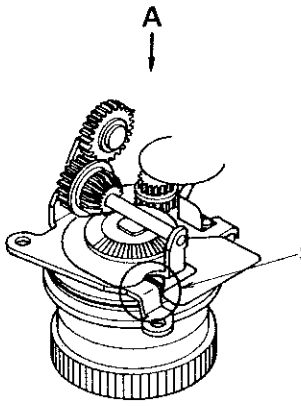
Adjustments can be made by positioning Shutter speed inner indicator #540 with inserting screwdriver blade through the access holes. After adjustments, cement Retainer #542 to secure the position.

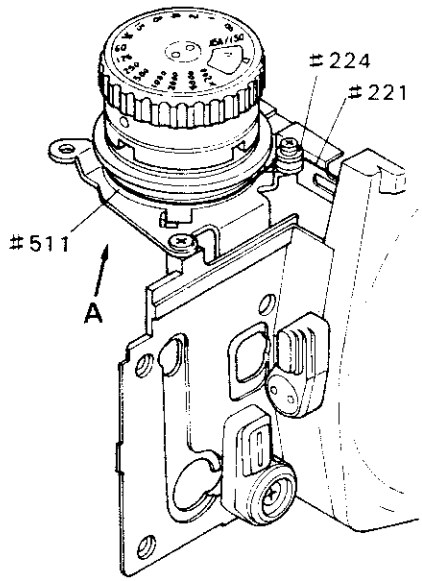


27. APERTURE COUPLING STRING TYING

Roller, aperture coupling string #223
↓
Roller, aperture coupling string #224
↓
Dial pully #511
↓
Dial pully axle #529

Hook the knot of the string to Dial pully axle #529 as shown in Figure 32.





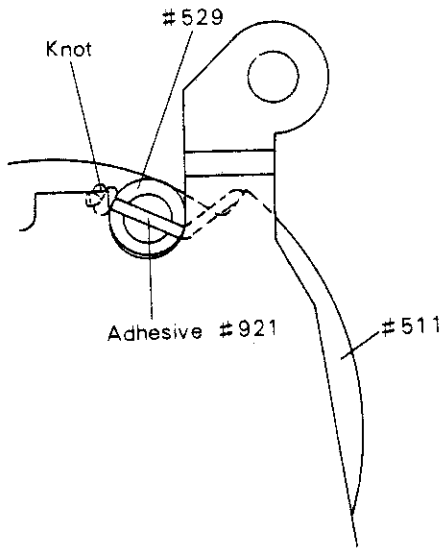
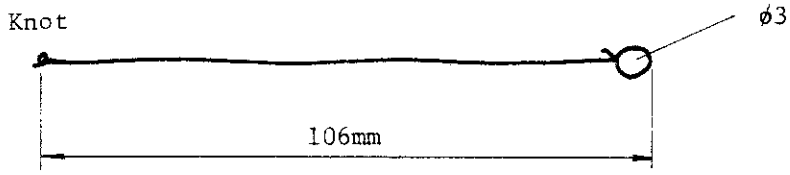


fig. 32

HOW TO TIE #211



28. FRE POSITIONING WITH USE OF COLLAR #529

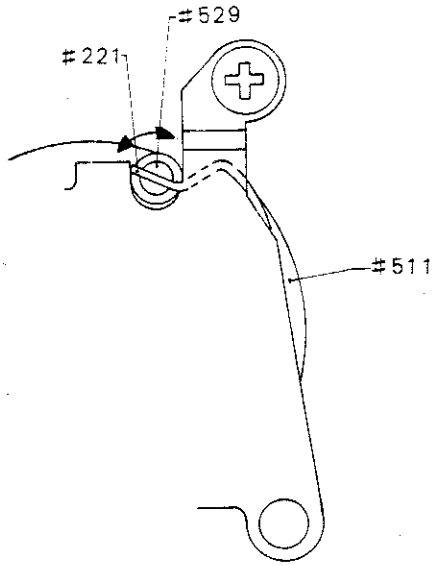


fig. 36

Tool: J18065

Mount tool J18065 to camera body and set click stop 1/3 by moving aperture ring from f/1.4 to f/2.
Make sure that Dial pully #511 should not turn at this setting. Adjustments can be made by turning Collar #529. Then, check if Dial pully #511 starts to turn when moving aperture ring from click stop 1/3 further to f/2.
Dial pully #511 should turn back smoothly when reversing aperture ring from f/16 to f/1.4.

FRE resistance value adjustment

Tool: J9003-2 (Digital Multi-meter)
J18065

Use J9003-2 to measure resistance between GND and Lead wire (yellow) #1064.

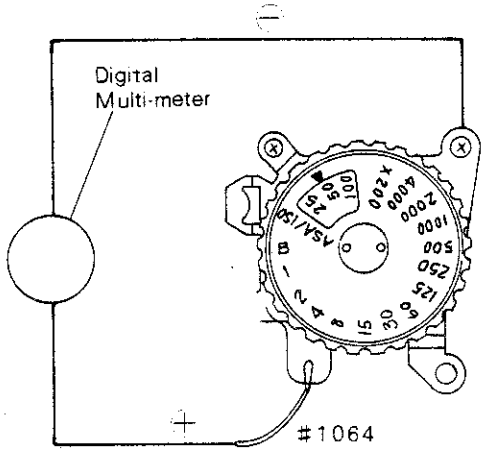


fig. 37

Specification:

f=2 1.35kΩ ± 0.2kΩ

f=1.6 0.6kΩ ± 0.1kΩ

(Shutter speed - 1 sec. ASA=100)

Adjustments can be made by turning FRE #552 after loosening Screw #634x2.

Check if the resistance value changes by degrees when turning aperture ring or shutter dial (especially when turning/ reversing aperture ring).

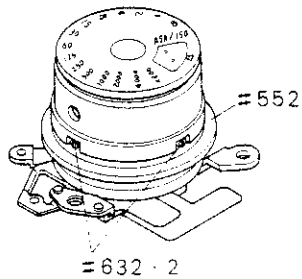


fig. 38

29. APERTURE COUPLING PIECE POSITIONING

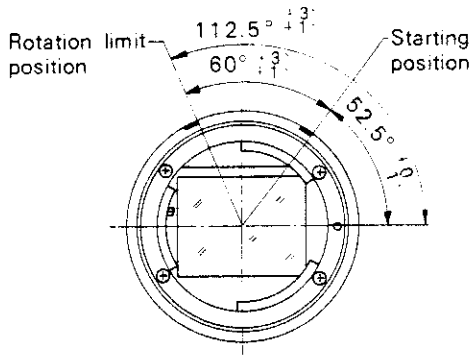


fig. 33 Positioning standard of aperture coupling ring

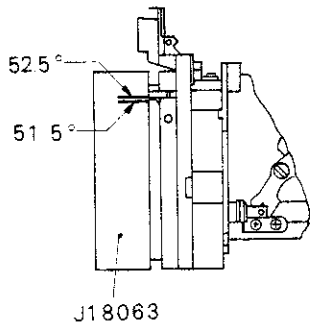


fig. 34 Aperture coupling piece starting position

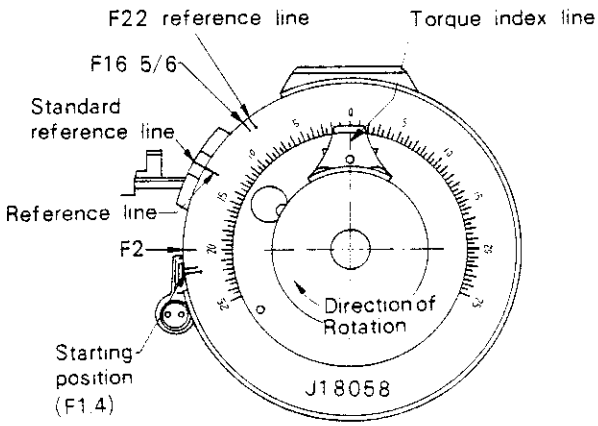


fig. 35 Torque index

Standard for
Aperture Coupling Piece Starting
Position and Maximum Angle of Rotation

Starting position: 52.5° +0° -1°

Maximum angle of rotation:
112.50° +3° +1°

Tool J18063

Refer to Figure 33.

Starting position checking

Mount F-number window checking gauge (J18063) onto bayonet.

Check that the right edge of #209 (lens release pin-side) is between two scales (52.5° & 51.5°) on J18063. If out of the scales, adjust by dislocating #222.

Refer to Figure 34.

Torque Standard

When rotating toward F22

at F16 5/6: 750g.cm or less

When rotating back toward max aperture

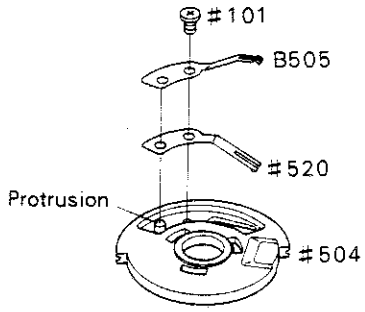
at F2 : 60g.cm or less

F1.4 reference line should surely return to align with the standard reference line.

How to measure

Mount the tool J18058 onto the bayonet. Align each reference line with the standard reference line, then rotate the tool's ring further to measure the torque when two lines separate.

30. DIAL PULLY INSTALLATION



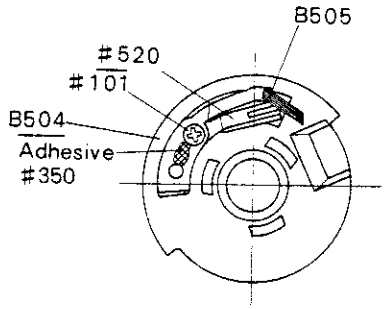


fig. 28

Dial pully B504

↓

FRE brush #520

Brush A FRE, B505

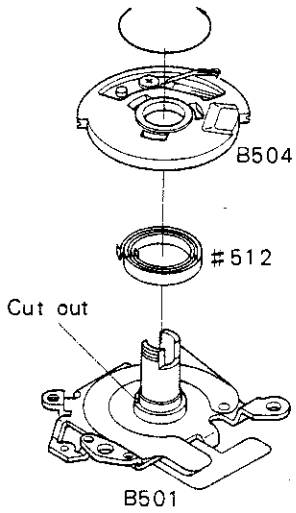
Screw ⊕ #101

Align the openings of the brushes with the bosses of the pully.

Be careful not to deform the brushes

Apply Bond #350 onto the place as shown in Figure 28.

Shutter control base installation



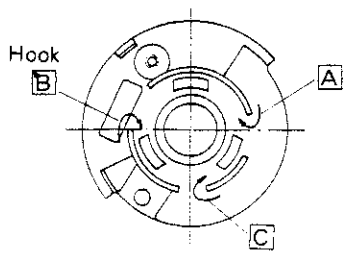


fig. 29 Spring hanging position

Shutter control base B501

↓

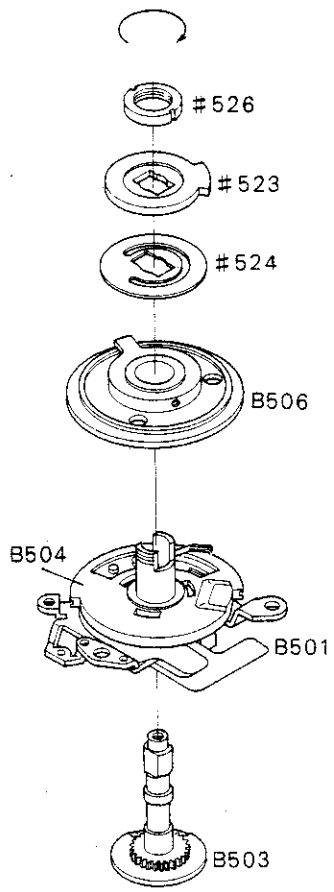
Dial pully B504

Hook one end of Pully spring #512 to Dial pully #511 as shown in Figure 29.

Hook the other end of the spring tc the cutout of Shutter control base B501 and turn the pully counterclockwise about one full turn.

Be careful not to bend FRE brush #520.

31. FRE INSTALLATION



Shutter control base B501

↓

Shutter dial shaft bearing B503

Position Brush #527 in the center of contacts on the shutter control base, as shown in Figure 30 (shutter speed dial set to B). Note that two marks on Double gear #544 are positioned also as shown in Figure 30.

FRE B506

↓

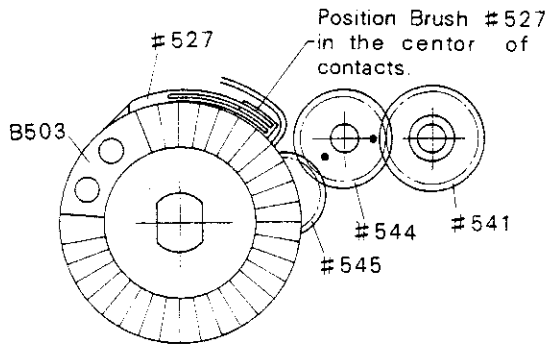
Disk, shutter control unit #524

↓

Shutter dial stopper #523

↓

Retainer, FRE #526



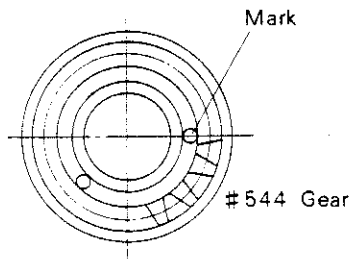
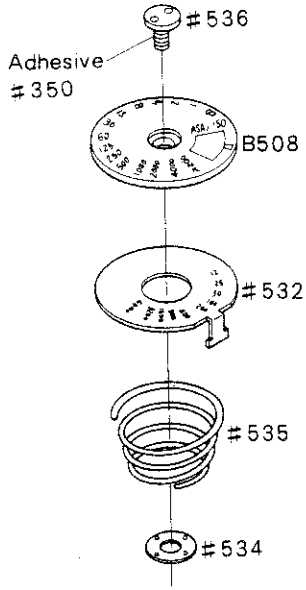


fig. 30 Shutter speed dial set to B

32. SHUTTER DIAL INSTALLATION



Shutter control base #501

↓ Shutter speed set to B

Steel ball #525

↓

Disk, shutter dial click #528

Clutch, shutter control unit #530

↓

Inner ring, shutter dial #534

↓

Washer, shutter dial #534

↓

Spring, shutter release button #535

↓

ASA calibration disk #532

↓

Shutter speeds disk B508

↓

Screw, shutter dial #536

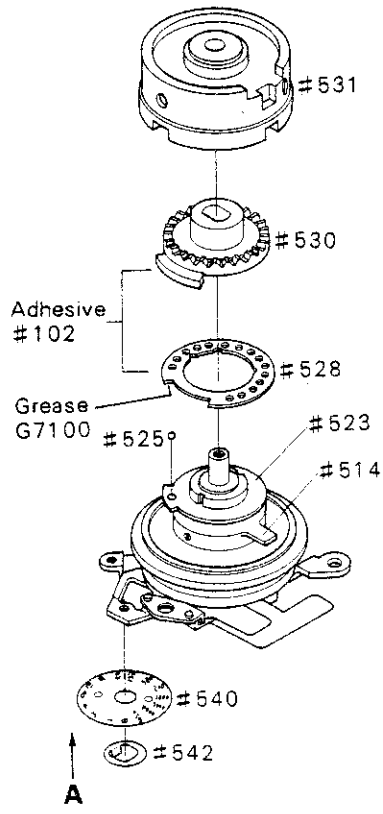
↓

Shutter speeds inner indicator #540

Refer to Figure 31.

↓

Retainer, shutter speeds inner indicator #542



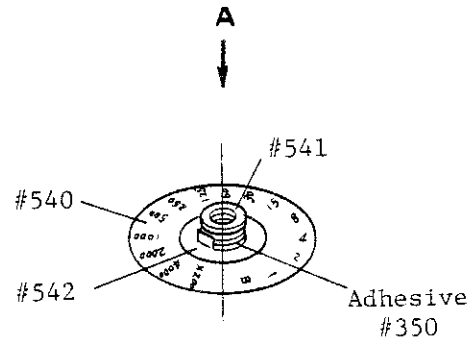


Fig.31

33. FRONT PLATE UNIT INSTALLATION

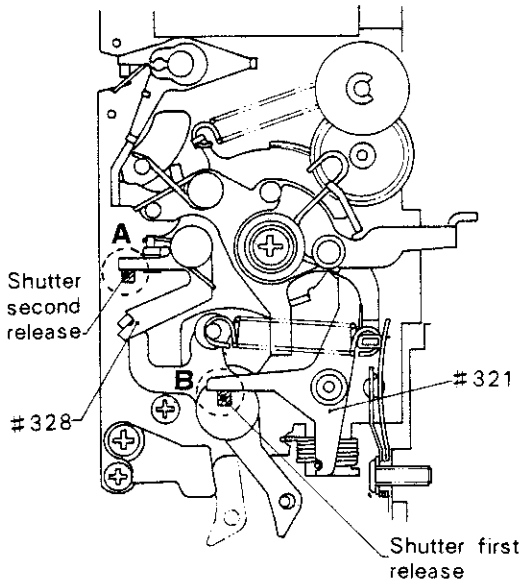


fig. 39

Camera body

↓ Shutter unit should be in the charged condition, with shutter speed set to B.

Front plate unit B328

Screw ⊕ #643x5
Screw ⊕ #620

Mirror box mechanism should be in the charged condition. Shutter dial is set to B.

Install the front plate unit, with checking the following engagements;

A (Shutter release lever #321
Shutter first release

B (Signal lever #328
Shutter second release

C (Eccentric screw #67
Release adjusting lever B313

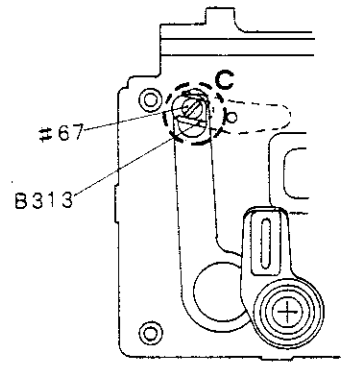


fig. 40

Place and hold front plate unit toward the arrow direction as shown in Figure 41. Use the opening to check if there is clearance of about 0.2mm between the addendum of shutter unit gear and the root of shutter control unit gear (Shutter idle gear #509)

Screws #643 and #620 should be tightened in the order as shown in Figure 41.

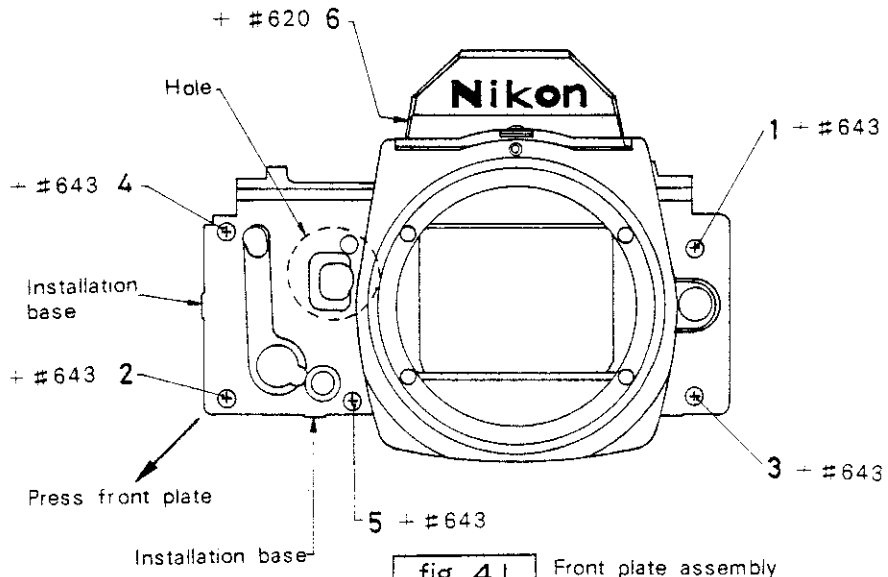


fig. 41 Front plate assembly Fixing Sequence

34. SHUTTER UNIT GEAR POSITIONING

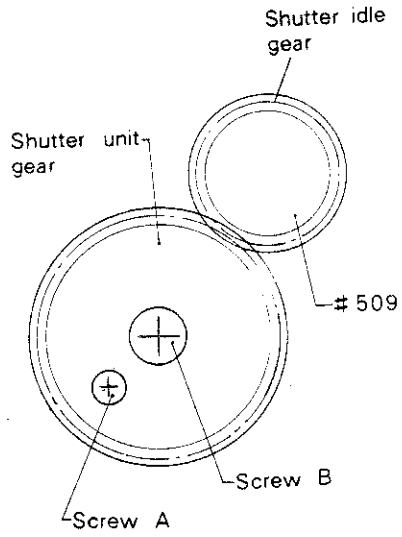


fig. 42

1. Turn shutter dial to set 1/30 and stop shutter unit gear to 1/30 click.
2. Loosen two screws securing shutter unit gear, with holding shutter dial to help stop the gear.
3. Turn shutter dial to stop Shutter idle gear #509 to 1/30 click.
4. Tighten two screws securing shutter unit, with holding shutter dial to help stop the gear engagement adjusted.
5. After positioning, turn shutter dial to check click stops at all shutter speeds from X200 to B.

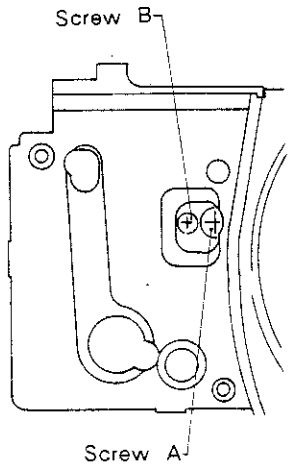


fig. 43

Checking after front plate unit installation

a. Flange focal distance

Tool: J18001-1, J19004
Specification: 46.67±0.02mm (outer film rail)

b. Blank-exposure preventing lever

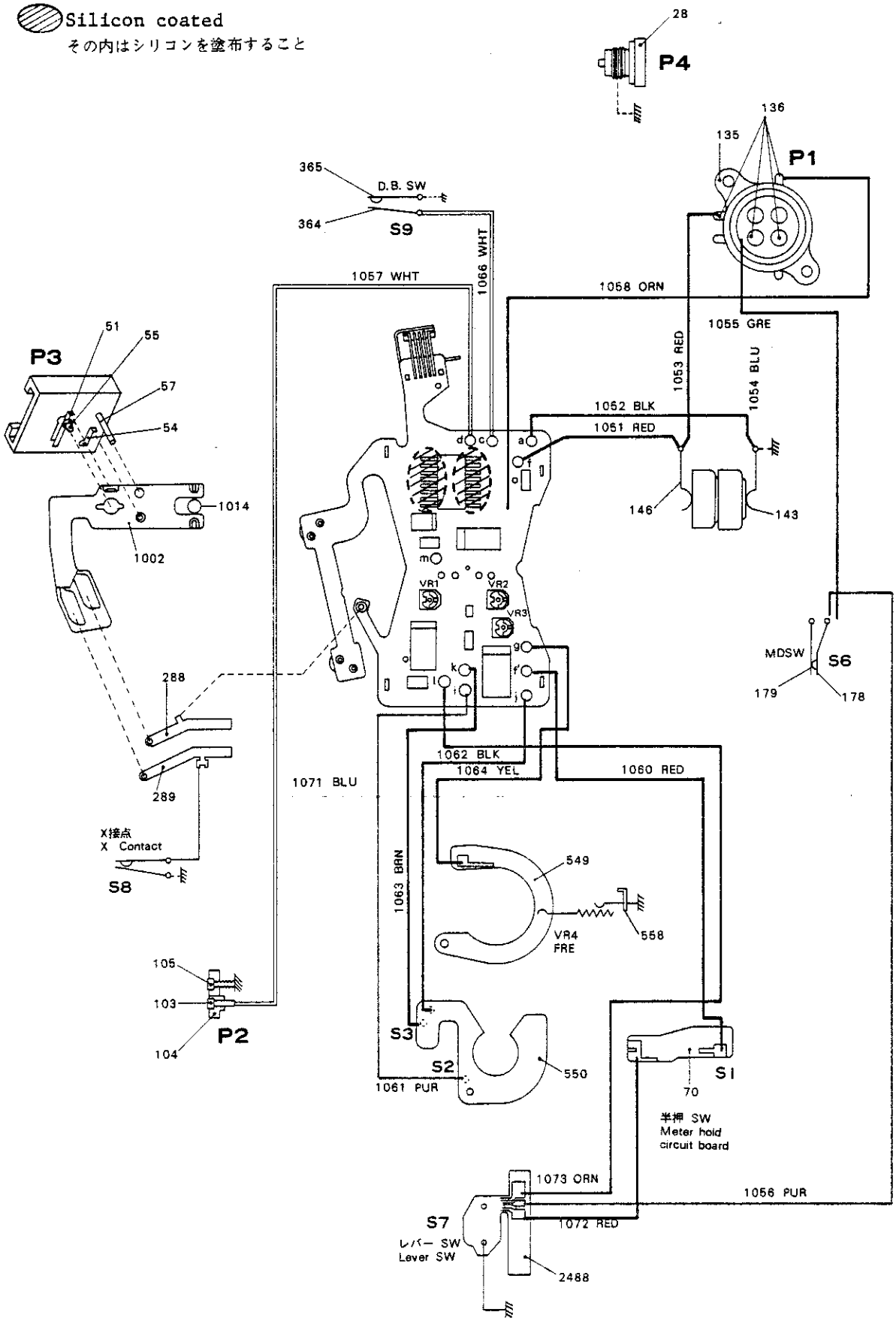
After returning the film-advance lever slowly, make sure that the film-advance lever is not be wound again with reverse of pendulum.

c. Mirror charge

Use Tool J18065 and set aperture to f/16. Then, wind film-advance lever. Repeat slow chargings several times to make sure that mirror is charged properly.

半田づけの注意は他のボディに準ずる

Silicon coated
その内はシリコンを塗布すること

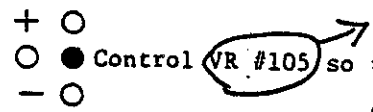


36. METER ACCURACY ADJUSTMENT

1) γ-adjustment (At EV 15)

Measuring method

Using 50mm/1.4 lens, set ASA to 100, shutter speed to 1/500 sec. and aperture to f/8.



so that only this LED lights.

● represents lighting of LED

2) Shift-adjustment (At EV 4)

Measuring method

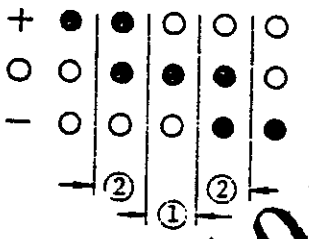
Using 50mm/1.4 lens, set ASA to 100, shutter speed to 1/2 sec. and aperture to f/2.8.

so that only this LED lights.

3) Checking all accuracies at EV 4, 6, 9, 11 and 15

Measuring method

Using 50mm/1.4 lens, set ASA to 100, setting shutter speed and aperture to all combination values.



Zone-① , correct exposure point ±0.5EV

Dead zone, 0.3 - 0.6EV

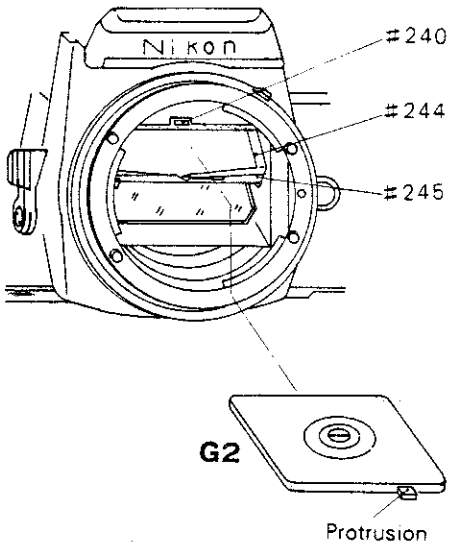
Zone-② Two-LEDs lighting range - 0.7 - 1.1EV

Make sure that 5 step indications are accomplished positively. Though the dial or ring is turned within their click slacks or other slacks, no other LED lights.

CORRECTION

NIKON FM2

37. FOCUSING SCREEN AND MIRROR REPLACEMENT



(1) Focusing screen (G2)

To remove G2, pull screen lock spring (#240) toward you, and screen frame (#245) falls down, ready for G2 removal.

Hold the protrusion on G2 with tweezers to prevent G2 from scratch.

Cleaning G2, place G2 on #245 with split plane up and the protrusion toward you.

Press up #245 until #245 locked with #240, being careful of G2 not to disengage from screen frame spring (#244).

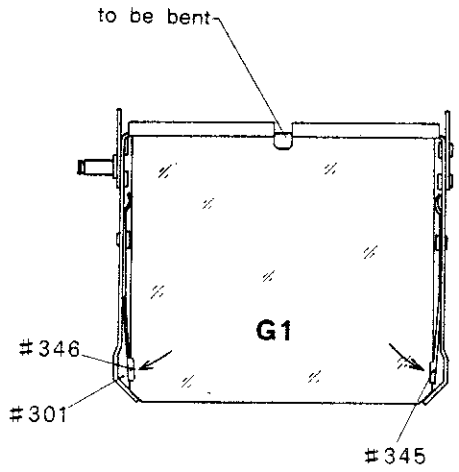


fig. 44 Mirror holder

(2) Mirror (G1)

Remove Mirror(G1) by pressing mirror holder A(#345) and B(#346) with a small screwdriver in the direction of arrow (See Fig.44).

Reinstall G1 in place as follows; Clean the faying surfaces of G1 and mirror holder(#301).

Apply adhesive #501 at two places on #301 (See Fig.45).

Place mirror in place.

Be careful not to transform #345 nor #346 and not to scratch mirror

To make sure the proper mirror installation, look through viewfinder for blur-free image at four corners.

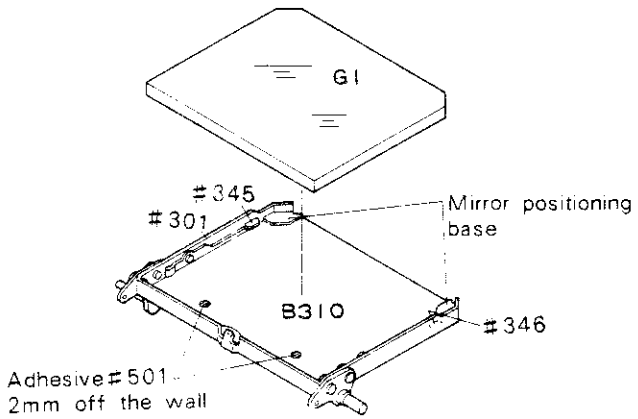


fig. 45 Mirror replacement

38. MD SWITCH FUNCTION CHECK

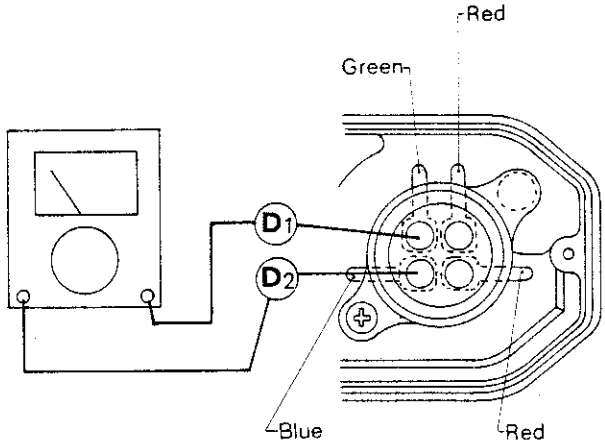


fig. 46

Connect an ohm-meter tc terminals D1 and D2 as shown in Figure 46.

Adjustments can be made by bending switch blades to increase/reduce the contact space.

Contact space: 1.5mm (OFF)

MD WINDING SWITCH		MD SWITCH		METER READING
WINDING	SWITCH	FILM-ADVANCE LEVER	SWITCH	
BEFORE	ON	RETRACT	ON	0 Ω
		STAND-OFF	OFF	∞
IN	ON	RETRACT	ON	0 Ω
		STAND-OFF	OFF	∞
AFTER	OFF	RETRACT	ON	∞
		STAND-OFF	OFF	∞

39. ACCESSORY SHOE FUNCTION CHECK

Tool: J15147

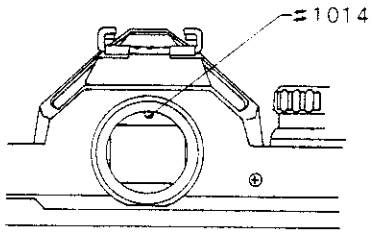


fig. 47

1) Check ready-light LED glow

SHUTTER SPEED SETTINGS	LED
1/4000-1/250	BLINKING
1/125,B,X200	GLOW

2) Check conductivity of accessory shoe against LED's glow of Tool J15147

40. SHUTTER RELEASE STROKE CHECK

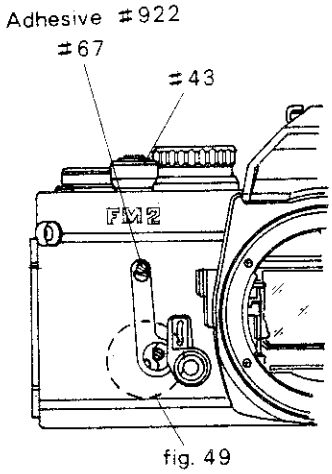


fig. 48

Specification:

Whole stroke: 2.5±0.3mm

Release stroke: 0 - -0.4mm
(from the top of Release button cover ring #43)

Adjustments can be made by turning Eccentric screw #67.

Meter switch check

Specification:

Switch-ON stroke: 0.3mm (from the top of Release button cover ring #43)

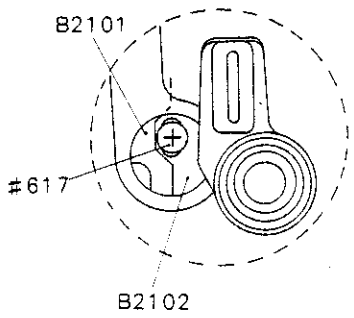


fig. 49

Adjustments can be made by re-positioning Circuit board B2102 after loosening Screw #617.

Make sure that retracting film-advance lever cancels meter switch when shutter release button is halfway depressed.

ELECTRIC CIRCUIT

Contents

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[1]	PRECAUTIONS	E1
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	2. #1001 Checking Lands	E3
	3. IC's Pins : Reference Voltage	E4
	4. Wiring Diagram	E5
[3]	EXPOSURE METER BLOCK DIAGRAM	E6
[4]	CIRCUIT OPERATION OUTLINE	E7
[5]	EXPOSURE READOUT LED	E8
[6]	READY-LIGHT LED	E13
[7]	MOTOR DRIVE	E14
[8]	SPEED LIGHT FAILS TO FIRE	
[9]	DATA BACK SW (S9) FAILS TO TURN ON	

[1] PRECAUTIONS

1. IC circuit board should not be touched barely. Use cotton gloves.
2. Be careful neither to deform leads of LEDs nor to move brushes of variable resistor.
3. Stick test prod into moisture-proof silicon coating to reach the terminal checked. Otherwise, the measurement results in error.
4. Voltage checking should be made on GND basis in principle.
5. VR1 for battery checker as a spare part is completely adjusted when shipped out from factory. Thus, it is not necessary to make adjustments after installation.
6. If necessary:

   6-1. VBC (Voltage of Battery Checker) = 2.34±60mV

   At temperatures 20°C-28°C
   Use Tool J15148 and a voltmeter (tracing capacity: 1mV) to check VBC.

   6-2. When VBC is out of standards, first measure the environment temperature and figure out the reference value of VBC in the following formula:

   $VBC=2.34+0.004(T-25)\pm25mV$

   T:temperature (°C)

   Then, make adjustments against the reference value calculated.

ABBREVIATIONS

ICC : Power current

VCC : Power voltage

VBC : Battery checker voltage

(16) : Number of pin of IC

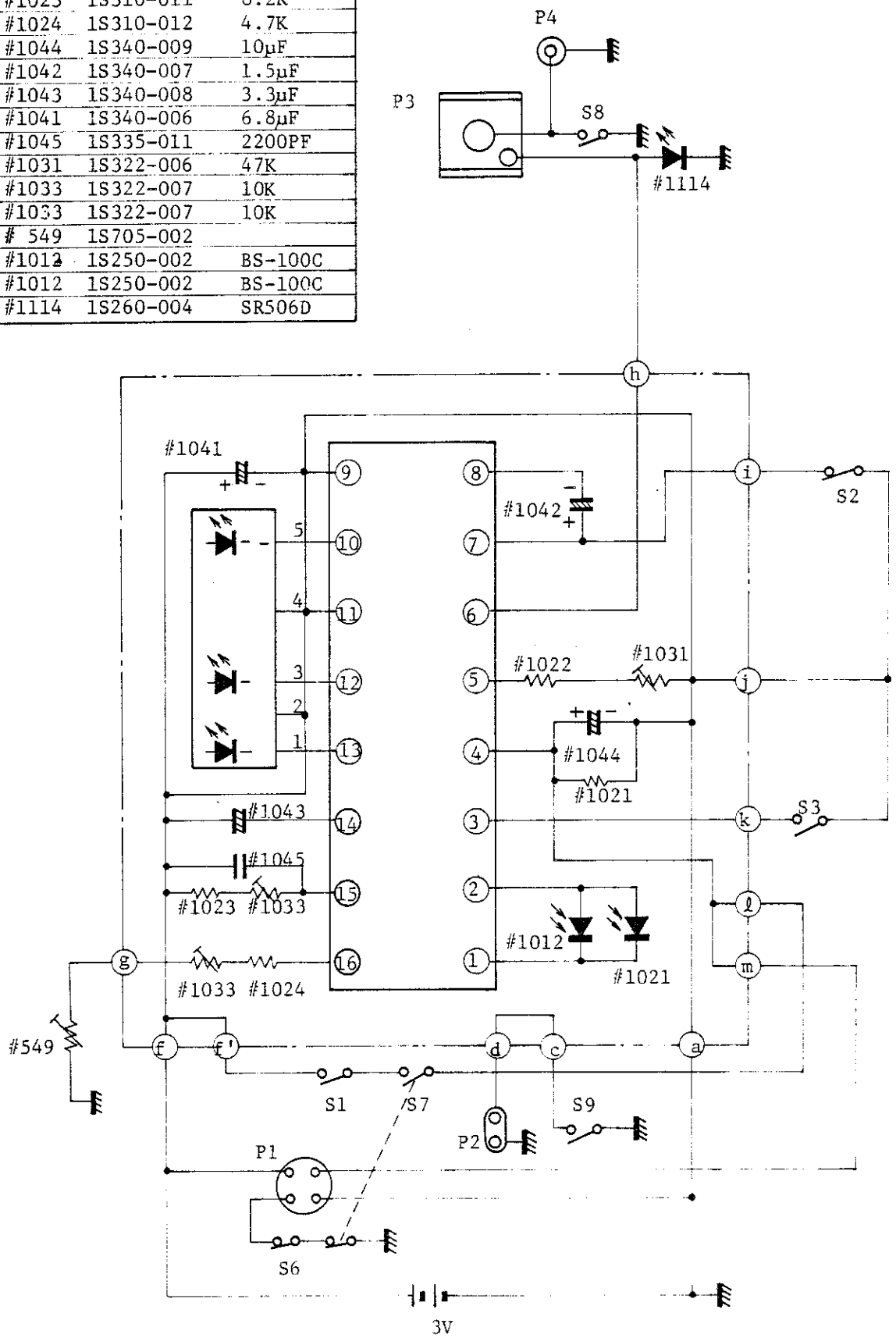
(9) : Number of check land of FPC

V(16) : Voltage of (16) pin of IC

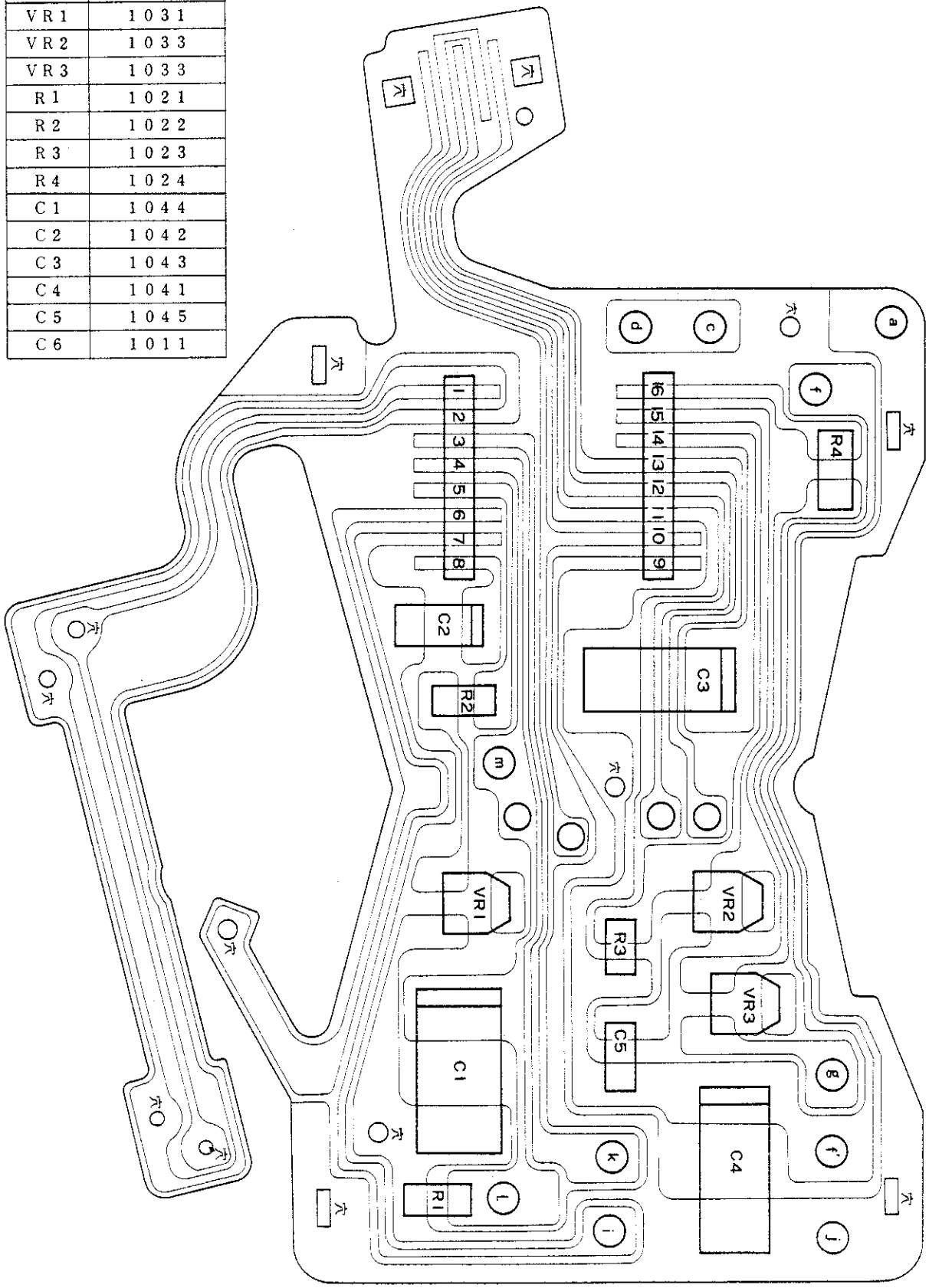
[2] 配 置 図 CHECK LANDS

1. 回 路 図 Circuit Diagram

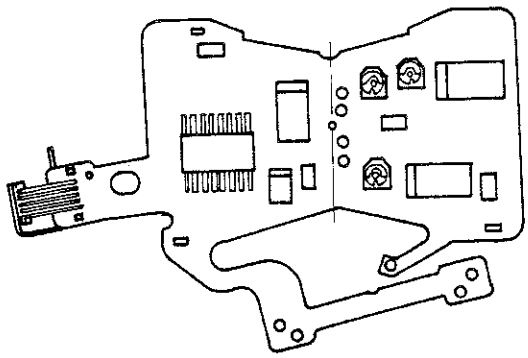
#1021	1S310-009	3.3M
#1022	1S310-010	39K
#1023	1S310-011	8.2K
#1024	1S310-012	4.7K
#1044	1S340-009	10μF
#1042	1S340-007	1.5μF
#1043	1S340-008	3.3μF
#1041	1S340-006	6.8μF
#1045	1S335-011	2200PF
#1031	1S322-006	47K
#1033	1S322-007	10K
#1033	1S322-007	10K
# 549	1S705-002	
#1012	1S250-002	BS-100C
#1012	1S250-002	BS-100C
#1114	1S260-004	SR506D

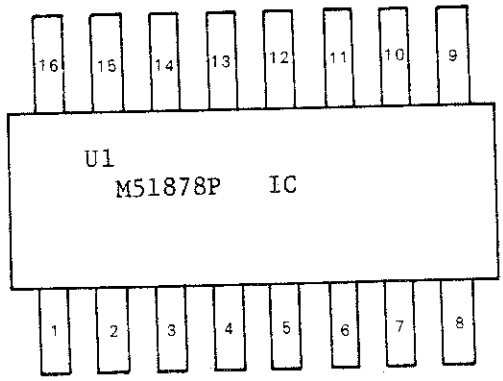


部品名 Mark	補助番号 Ckt. No.
VR1	1031
VR2	1033
VR3	1033
R1	1021
R2	1022
R3	1023
R4	1024
C1	1044
C2	1042
C3	1043
C4	1041
C5	1045
C6	1011



3. IC'S PINS: REFERENCES VOLTAGE





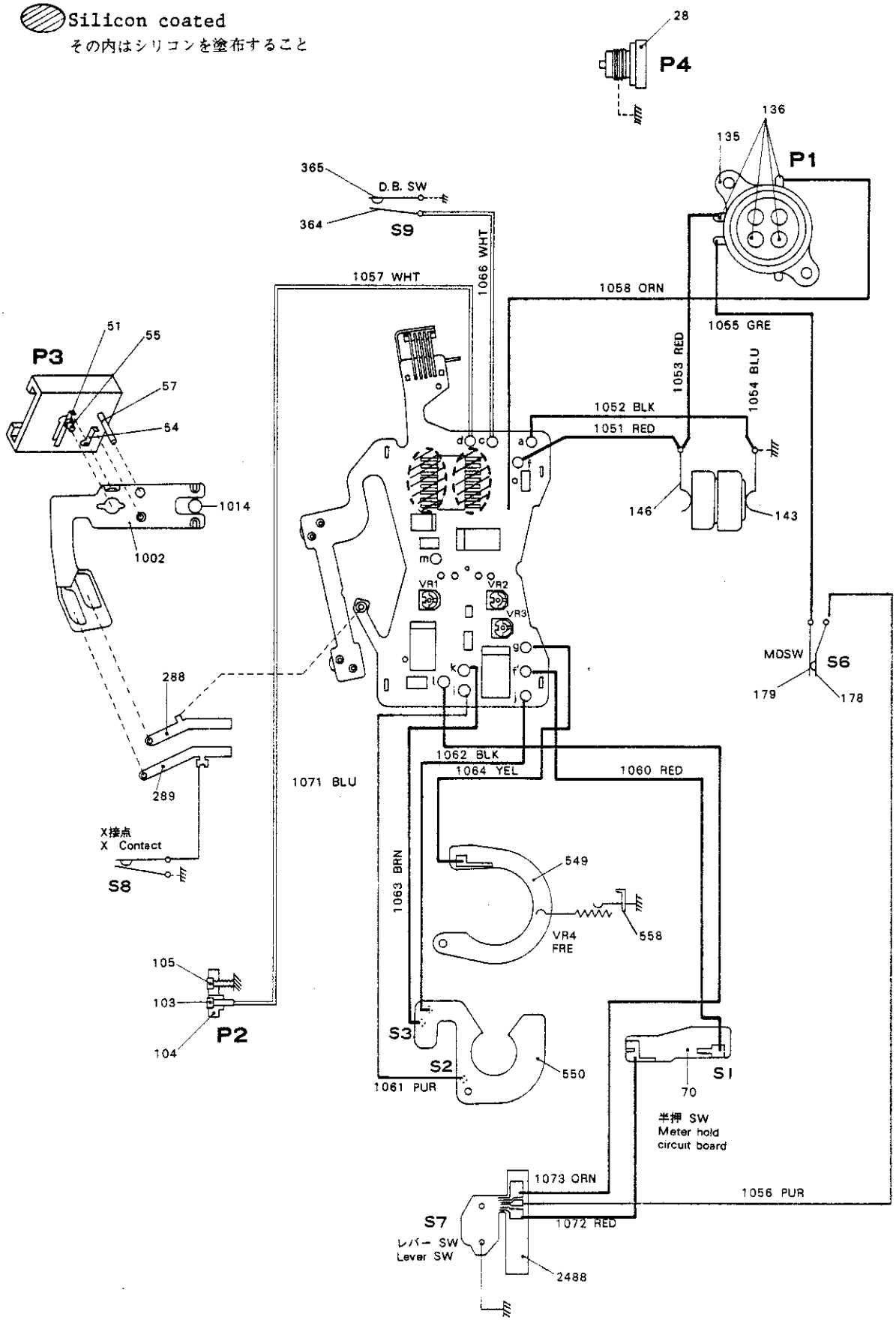
VCC=3V (GND BASIS)

PIN	REFERENCE VOLTAGE	OPERATION OF CIRCUITRY
①	380 mV	MOS logarithmic compression
②	380 mV	MOS logarithmic compression
③	0.6 V	Input signal terminal: B, X200
④	3.0 V	Meter hold
⑤	2.2 V	Battery checker
⑨	0 V	GND
⑩	ON 1.5V OFF 2.0V	LED −
⑪	3.0 V	VCC
⑫	ON 1.5V OFF 2.0V	LED ◎
⑬	ON 1.5V OFF 2.0V	LED +
⑭	1.6V - 2.7V	Process output 72mV/EV
⑮	2.75V	- adjustments voltage
⑯	0.2V - 0.6V	Exposure factors setting 18mV/EV

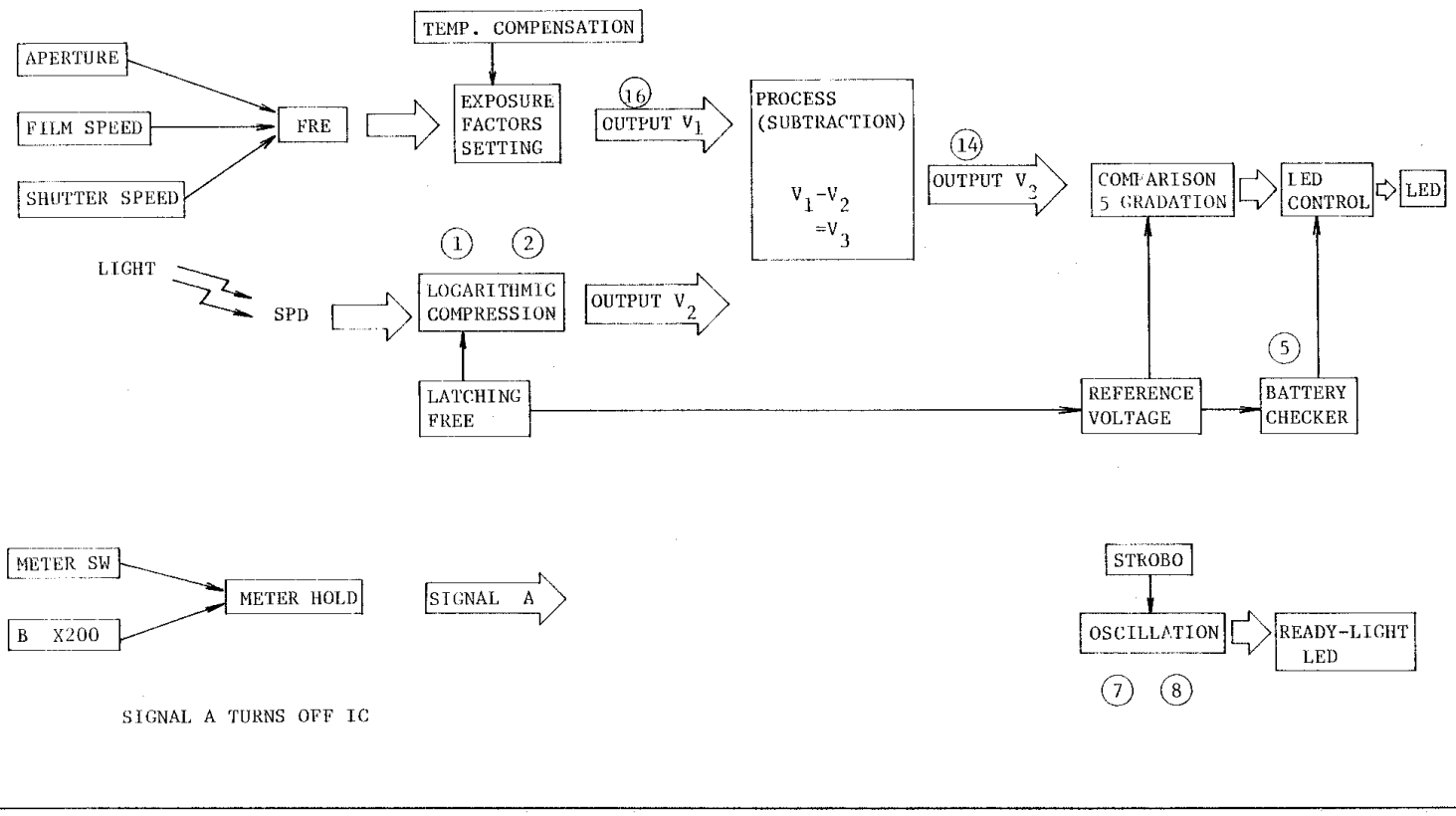
	STROBO		Recycling	
	OFF	ON		
⑥	0 V	2 V	2 V / 1.4V	Input terminal
⑦	0 V	0 V	0.6V / 0 V	Oscillation terminal
⑧	0 V	0.6V	0.6V / 0 V	Oscillation terminal

半田づけの注意は他のボディに準ずる

Silicon coated
その内はシリコンを塗布すること



[3] EXPOSURE METER BLOCK DIAGRAM



SIGNAL A TURNS OFF IC

[4] CIRCUIT OPERATION OUTLINE

This exposure meter checks the lighting situations against the correlation of film speed, shutter speed and aperture in use. Exposure readout is through the triple LED display. The three LED's combine to provide five different gradations.

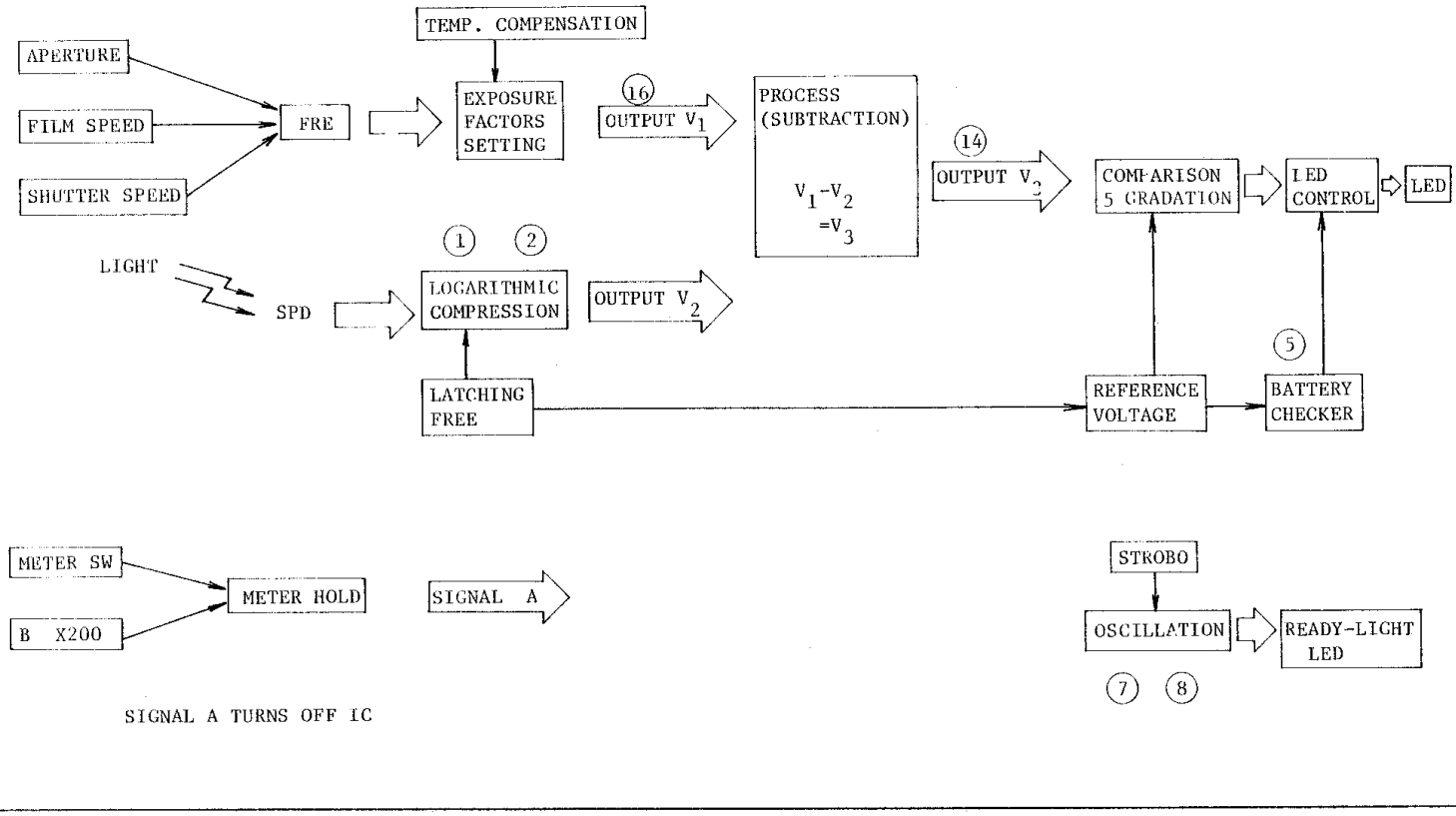
SPD changes the light evergy into the current flow. The current flow is converted through the MOS logarithmic time compression circuit into the voltage (V2). On the other hand, film speed, shutter speed and aperture in use are converted through FRE into the resistance value, which is changed again into the voltage (V1) in the exposure factors setting circuit. V1 and V2 are combined in the process circuit to output the voltage (V3). V3 is related to four reference voltages in the comparison circuit and sorted to five different gradations; ✙,✙◎,◎,◎▭,▭ It allows the pertaining LED's to glow in the viewfinder.

The exposure factors setting circuit is provided with the temperature compensation circuit in order to avoid the temperature influence on the accuracy of metering.
The latching free circuit makes the whole circuit operation stable instantly when the light situation is of low luminosity or when the batteries are exchanged.

The battery checker circuit turns off LED's when the voltage of batteries installed goes down to approx. 2.34V (25°C). The reference voltage will be reduced at low temperatures so that the battery checker may not cut off the life of batteries temporarily incapacitated.

Shutter release button switches meter on when depressed halfway: the meter hold circuit permits meter to remain on for approx. 30 sec. after finger is taken off button. This device is canceled by turning shutter dial to Bulb or X200. When the speed-light mounted, the ready-light glows at the finder eyepiece. It blinks to warn out-of-synchronization shutter speeds from 1/250 sec. to 1/4000 sec.

[3] EXPOSURE METER BLOCK DIAGRAM



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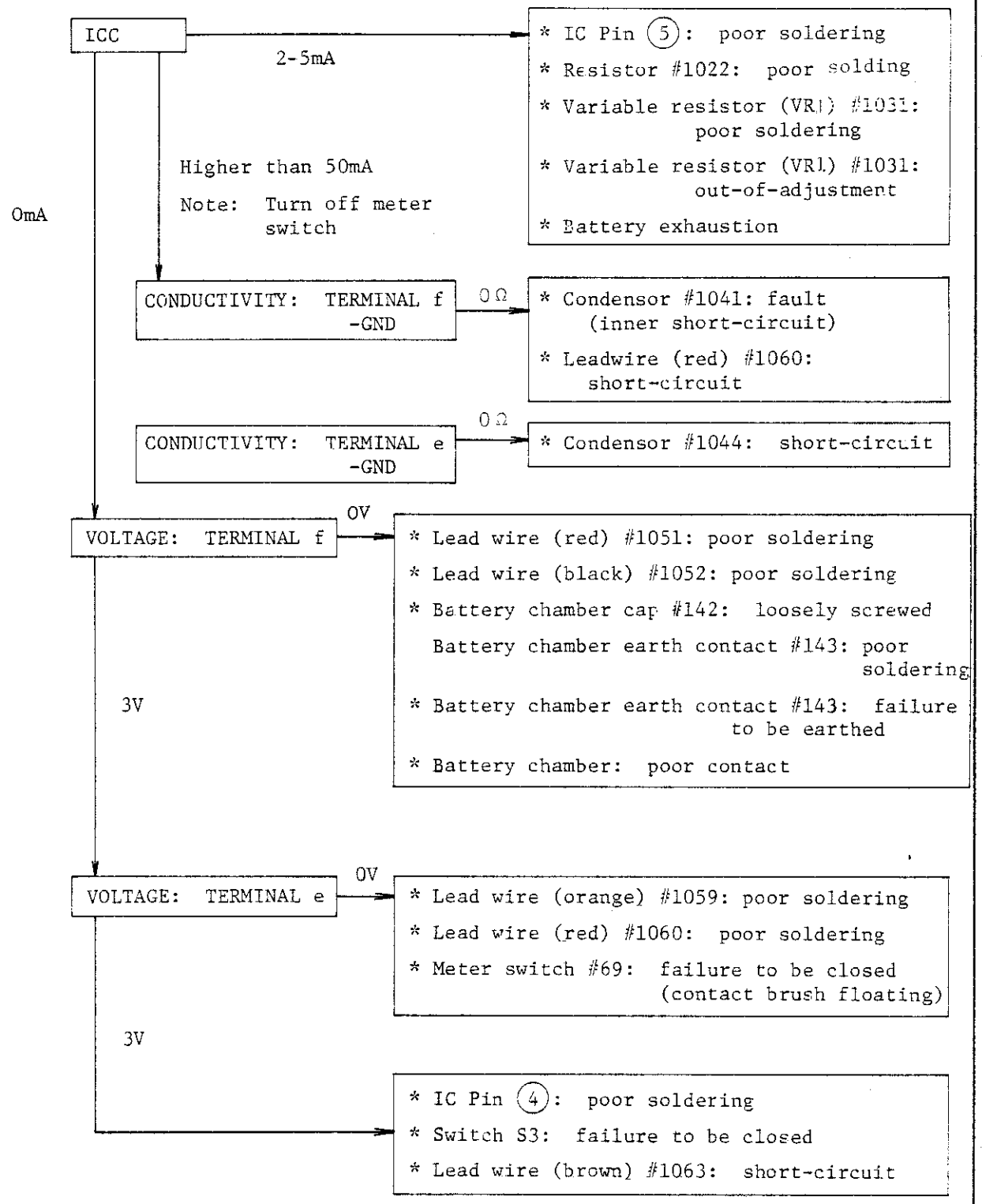
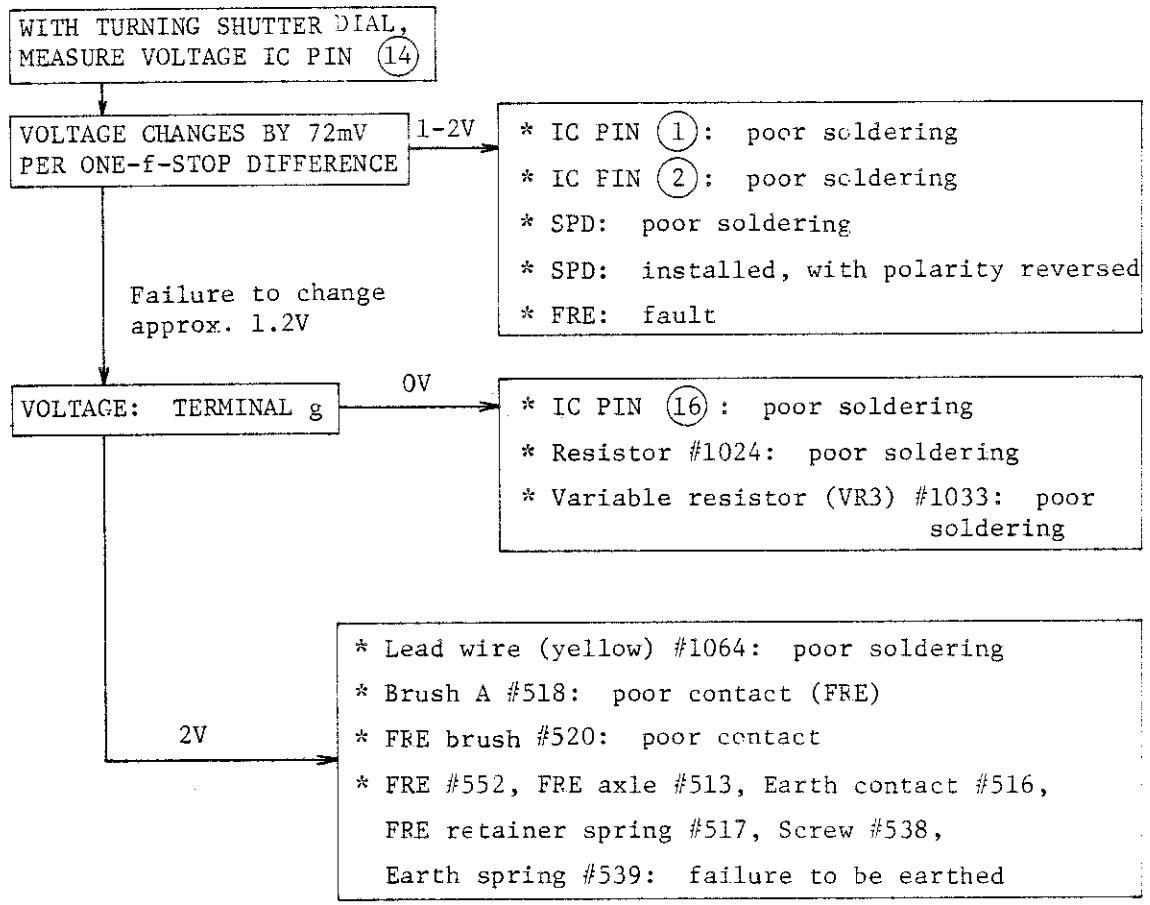
[5] EXPOSURE READOUT LED

1. FAILURE TO GLOW ⟶ CHECK POWER SUPPLY CIRCUIT


ICC
2-5mA
* IC Pin (5): poor soldering
* Resistor #1022: poor solding
* Variable resistor (VR1) #1031: poor soldering
* Variable resistor (VR1) #1031: out-of-adjustment
* Battery exhaustion
Higher than 50mA
Note: Turn off meter switch
0mA
CONDUCTIVITY: TERMINAL f -GND
0Ω
* Condensor #1041: fault (inner short-circuit)
* Leadwire (red) #1060: short-circuit
CONDUCTIVITY: TERMINAL e -GND
0Ω
* Condensor #1044: short-circuit
VOLTAGE: TERMINAL f
0V
* Lead wire (red) #1051: poor soldering
* Lead wire (black) #1052: poor soldering
* Battery chamber cap #142: loosely screwed
Battery chamber earth contact #143: poor soldering
* Battery chamber earth contact #143: failure to be earthed
* Battery chamber: poor contact
3V
VOLTAGE: TERMINAL e
0V
* Lead wire (orange) #1059: poor soldering
* Lead wire (red) #1060: poor soldering
* Meter switch #69: failure to be closed (contact brush floating)
3V
* IC Pin (4): poor soldering
* Switch S3: failure to be closed
* Lead wire (brown) #1063: short-circuit

2. LED FAILS TO CHANGE READOUT ═→CHECK FRE AND SPD


WITH TURNING SHUTTER DIAL, MEASURE VOLTAGE IC PIN (14)
VOLTAGE CHANGES BY 72mV PER ONE-f-STOP DIFFERENCE
1-2V
* IC PIN (1): poor soldering
* IC PIN (2): poor soldering
* SPD: poor soldering
* SPD: installed, with polarity reversed
* FRE: fault
Failure to change approx. 1.2V
VOLTAGE: TERMINAL g
0V
* IC PIN (16): poor soldering
* Resistor #1024: poor soldering
* Variable resistor (VR3) #1033: poor soldering
2V
* Lead wire (yellow) #1064: poor soldering
* Brush A #518: poor contact (FRE)
* FRE brush #520: poor contact
* FRE #552, FRE axle #513, Earth contact #516, FRE retainer spring #517, Screw #538, Earth spring #539: failure to be earthed

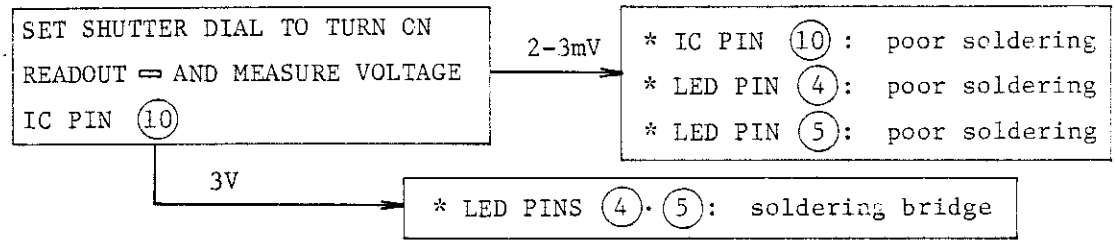
3. LED FAILS TO CHANGE READOUT ✣ ——→ CHECK IC PIN (15)

* IC PIN (15): poor soldering
* Resistor #1023: poor soldering
* Variable resistor #1033 (VR2): poor soldering
* Condensor #1043: fault (inner short-circuit)
* Lead wire (yellow) #1064: short-circuit

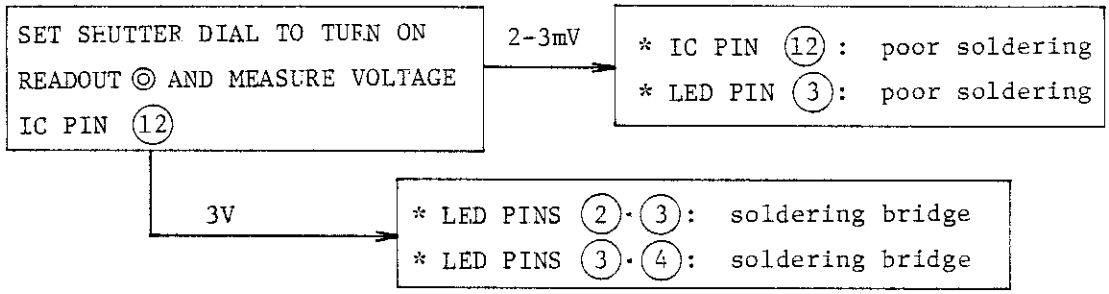
(1) LED FAILS TO CHANGE READOUT ✣ AT SHUTTER SPEED SETTINGS FROM B TO 125, X200 (LED WILL TURN OFF AT SETTINGS FROM 250 TO 4000)

* IC PIN (9): poor soldering

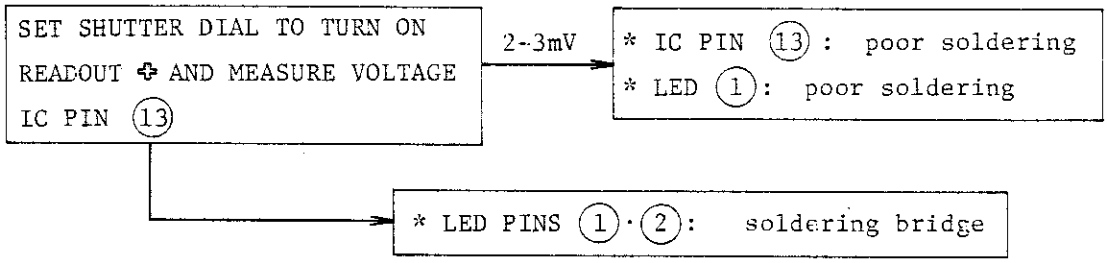
4. LED FAILS TO TURN ON READOUT ▭


SET SHUTTER DIAL TO TURN ON
READOUT ▭ AND MEASURE VOLTAGE
IC PIN (10)
2-3mV
* IC PIN (10) : poor soldering
* LED PIN (4): poor soldering
* LED PIN (5): poor soldering
3V
* LED PINS (4)·(5): soldering bridge

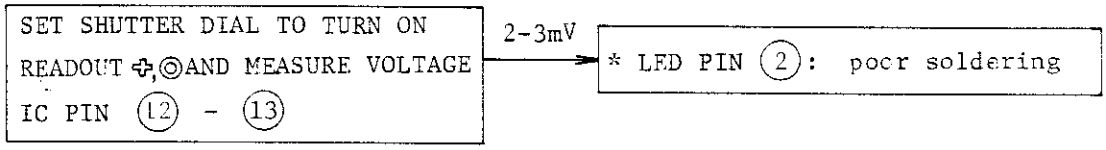
5. LED FAILS TO TURN ON READOUT ◎


SET SHUTTER DIAL TO TURN ON
READOUT ◎ AND MEASURE VOLTAGE
IC PIN (12)
2-3mV
* IC PIN (12) : poor soldering
* LED PIN (3): poor soldering
3V
* LED PINS (2)·(3): soldering bridge
* LED PINS (3)·(4): soldering bridge

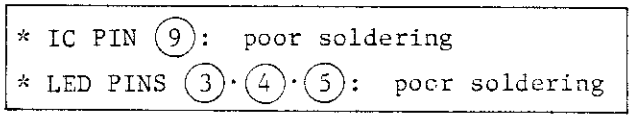
6. LED FAILS TO TURN ON READOUT ✣


SET SHUTTER DIAL TO TURN ON
READOUT ✣ AND MEASURE VOLTAGE
IC PIN (13)
2-3mV
* IC PIN (13) : poor soldering
* LED (1): poor soldering
* LED PINS (1)·(2): soldering bridge

7. LED FAILS TO TURN ON READOUTS ✣ ◎



8. LED FAILS TO TURN ON READOUTS ▭ ◎



9. LED TURNS ON ALL READOUTS ✣ ◎ ═ SIMULTANEOUSLY

* IC PIN (11): poor soldering
* IC PIN (14): poor soldering
* Condensor #1043: poor soldering or fault

(1) LED TURNS ON ALL READOUTS ✣ ◎ ═ SIMULTANEOUSY AT SHUTTER SPEED SETTINGS B OR X200

* Lead wire (black) #1062: poor soldering
* Brush, shutter control unit #527: poor contact

10. IC TURNS ON AT SHUTTER SPEED SETTINGS B OR X200

* IC PIN (3): poor soldering
* Lead wire (black) #1062: poor soldering
* Lead wire (brown) #1063: poor soldering
* Switch S3: failure to be closed
* Brush, shutter control unit #527: poor soldering

11. METER HOLDING TIME IS INCORRECT

METER HOLDING TIME

Excessive Long →
* Resistor #1021: poor soldering
* Meter switch S1: failure to be closed

Short →
0 sec. * Condensor #1044: poor soldering or fault
15 sec. * Condensor #1044: installed, with polarity reversed

12. LED'S GLOW FLUCTUATING

* Brush A, FRE #518: instable contact
* FRE brush #520: instable contact
* FRE #552, FRE axle #513, Earth contact #516, FRE retainer spring #517, Screw #538, Earth spring #539: failure to be earthed
* FRE: dirt or breakage of resistor element

13. METER ACCURACY IS OUT-OF-ADJUSTMENT

(1) BATTERY CHECKER VOLTAGE

* Variable resistor #1031 (VR1): soldering bridge
* Variable resistor #1031 (VR1): connector floating

(2) γ VOLTAGE

* Variable resistor #1033 (VR2): soldering bridge
* Variable resistor #1033 (VR2): connector floating
* IC: incorrect γ voltage (Specification; 250±21mV)
  check voltage between Vcc and PIN (15)
* FRE: incorrect installation

(3) SHIFT VOLTAGE

* Variable resistor #1033 (VR3): soldering bridge
* Variable resistor #1033 (VR3): connector floating
* SPD: poor soldering
* SPD: installed, with polarity reversed
* IC: incorrect Rf (exposure meter resistance value)
* FRE: out-of-adjustment

[6] READY-LIGHT LED

1. LED FAILS TO GLOW/FLICKER

* IC PIN (7): poor soldering
* Condensor #1042: fault (inner short-circuit)
* LED: installed, with polarity reversed
* Signal contact #57: poor soldering with Ready-light circuit board #1002
* Earth lug plate #54: poor soldering with Ready-light circuit board #1002

2. LED FAILS TO FLICKER AT SHUTTER SPEED SETTINGS FROM 250 TO 4000

* IC PIN (6): poor soldering
* Switch S2: failure to be opened
* Lead wire (violet) #1061: short-circuit
* Shoe connecting contact A #288: poor soldering with terminal h on Ready-light circuit board #1002
* Shoe connecting contact A #288: poor contact with Ready-light circuit board #1002

3. LED CONTINUES TO FLICKER

* Lead wire (violet) #1061: poor soldering
* Switch S2: failure to be closed
* Brush, shutter control unit #527: poor contact

4. LED TURNS OFF AT SHUTTER SPEED SETTINGS FROM 250 TO 4000

* IC PIN (8): poor soldering
* Condensor #1042: poor soldering or inner fault

[7] MOTOR DRIVE

1. MOTOR DRIVE FAILS TO WORK

* Lead wire (green) #1055: poor soldering
* Lead wire (violet) #1056: poor soldering
* MD switch (S6): failure to be closed or opened
* Lever switch (S7): failure to be closed
* Blade A, MD switch #179: short-circuit with bottom cover

2. OTHERS

(1) METER HOLD FAILS TO BE CANCELED BY ATTACHING MD 11

* Lead wire (orange) #1058: poor soldering

(2) METER HOLD IS CANCELED BY ATTACHING MOTOR DRIVE

* Lead wire (red) #1053: poor soldering

(3) MOTOR DRIVE FAILS TO WORK WHEN FILM-ADVANCE LEVER IS IN STAND-OFF POSITION

* Lever switch (S7): failure to be opened

[8] SPEED LIGHT FAILS TO FIRE

* Lead wire (green) #1070: poor soldering
* Lead wire (blue) #1071: poor soldering
* X-contact (S8): failure to be ON
* Shoe connecting B #289: poor contact with Ready-light circuit board #1002
* Lower contact, shoe #51: poor soldering with Ready-light circuit board #1002

[9] DATA BACK SWITCH (S9) FAILS TO TURN ON

* Lead wire (white) #1057: poor soldering
* Lead wire (white) #1066: poor soldering
* Shutter switch A #364: settling
* Shutter switch B #365: failure to be earthed

SPECIFICATIONS & MECHANISM

Contents Page

[1] FIGURE OF EXTERNAL M1

[2] SPECIFICATIONS M2

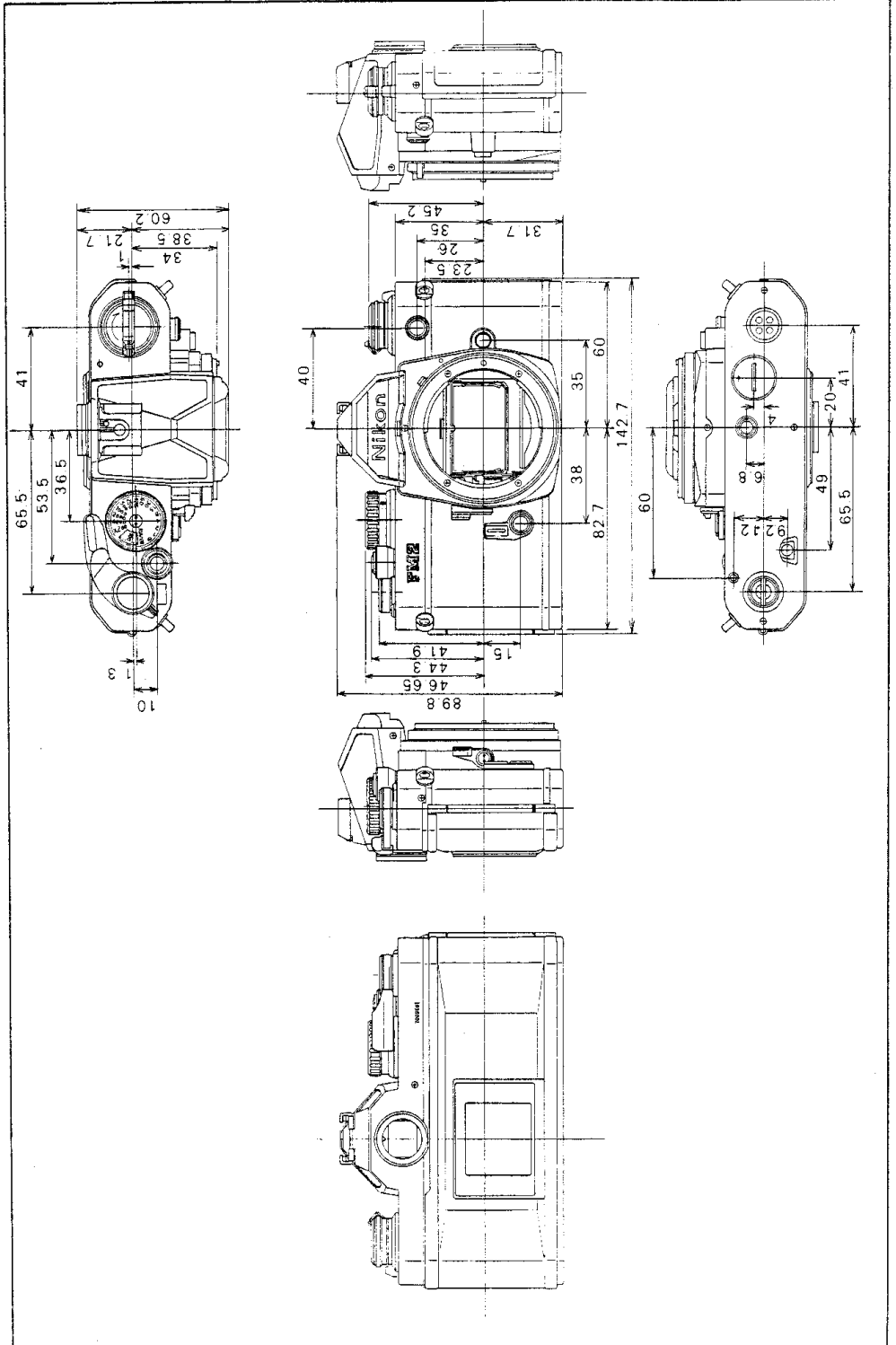
[3] MECHANISM OUTLINE

1. Meter Coupling System M4

2. Mirror Box Mecanism M6

〔1〕外観図　Figure of External

FAA14001-R.3110.A

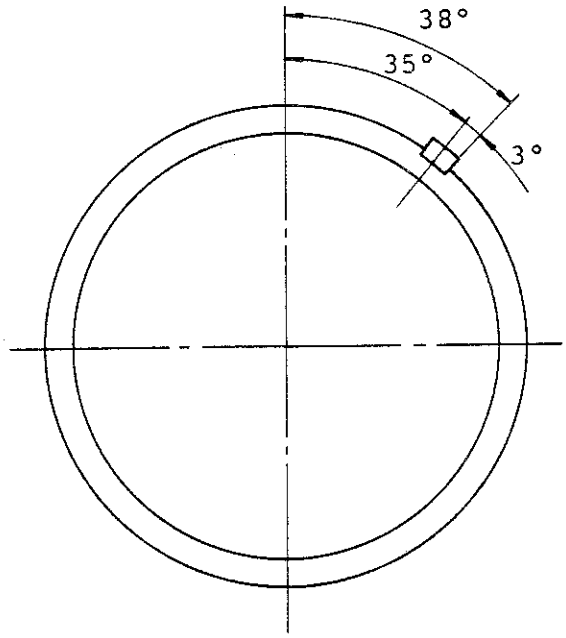
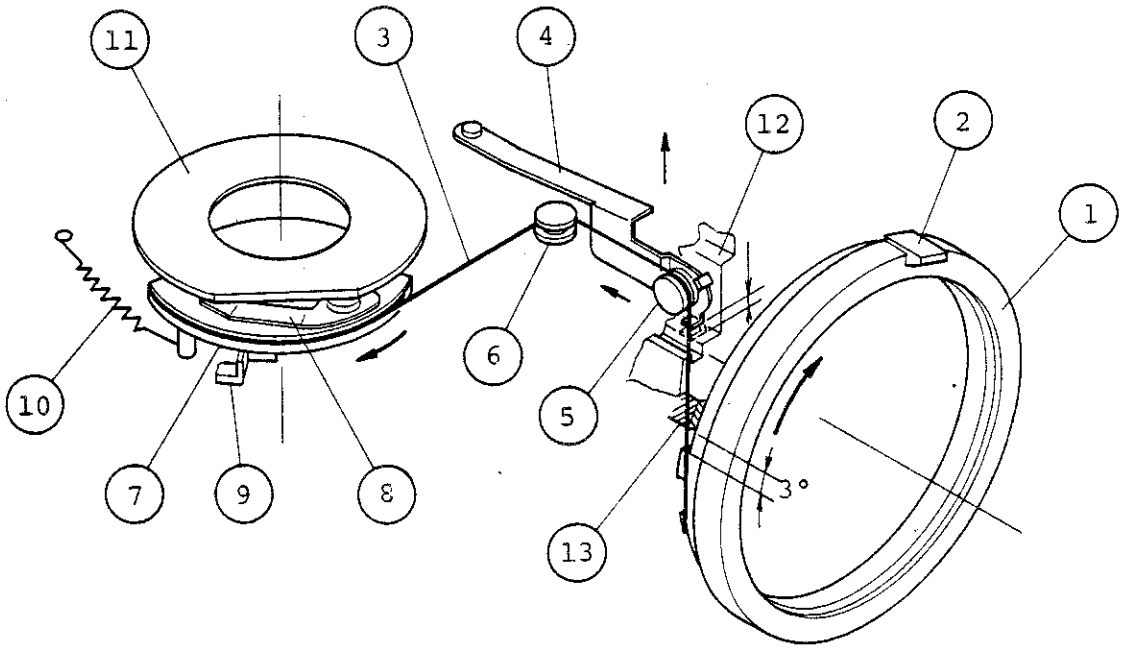


[2] SPECIFICATIONS

Type of camera:	35mm single-lens reflex
Film:	35mm film
Picture format:	24mm x 36mm
Lens mount:	Nikon boyonet mount
Lenses:	Nikkor 50mm f/1.2, 50mm f/1.4 or 50mm f/1.8 as standard
Shutter:	Vertically traveling metal focal-plane shutter; shutter speeds from 1 sec. to 1/4000 sec., including "B" and "X" (1/200 sec.)
Self-timer:	8 sec. - 14 sec. delayed exposure
Viewfinder:	Eyelevel pentaprism type; 93% frame coverage
Focusing screen:	Type K as standard; interchangeable with B and E type; clip-on type installation
Viewfinder display:	Three LEDs display five exposure gradations; shutter speed in use; aperture in use shown through ADR window
Automatic Maximum Aperture Indexing:	Provided
Reflex mirror:	Automatic instant-return type
Depth-of-field preview lever:	Provided
Film-advance lever:	Wound in single stroke; 30° stand-off angle and 135° winding angle
Batteries:	Two 1.5V silver-oxide button type cells or 3.0V lithium cell; LEDs viewfinder display doubles as battery checker
Motor drive usable:	MD-11/12
Multiple exposure lever:	Provided
Frame counter:	Additive type; automatically reset when camera back is opened
Film rewind:	By crank after film rewind button is depressed
Exposure metering:	Through-the-lens center-weighted metering; two Silicon Photo Diodes(SPD) incorporated

Metering range:	EV1 to EV18(with 50mm f/1.4 lens and ASA 100 film)
Film-speed setting:	ASA 12 to ASA 6400
Shutter release button:	Switches meter on when depressed halfway; meter then remains on for approx. 30 sec. after finger is taken off button
Flash synchronization:	Speeds up to 1/200 sec.
Accessory shoe:	Provided; ready-light contact incorporated
LED ready-light:	Glows when SB-10 or SB-E is recycled; warns out-of-synchronization shutter speeds
Camera back:	Hinged; interchangeable type; opened by pushing safety lock while pulling up rewind knob; memo holder provided
Dimensions:	Approx. 89.7(H) x 142.3 (W) x 60.2mm(D)
Weight:	Approx. 590g (without lens)

[3] MECHANISM OUTLINE

1. METER COUPLING SYSTEM

The meter coupling system is provided with the automatic maximum aperture indexing, which has been introduced into the earlier models such as Nikon FM and FE etc. But the meter coupling lever is not retractable for mounting the non-AI Nikkor lenses.